The Beaver

A MAGAZINE OF THE NORTH

OUTFIT 267
NUMBER 4

PUBLISHED QUARTERLY BY
Hudson's Bay Company.
INCORPORATED 2ND MAY 1670.

To The Canadian Committee

In London and Winnipeg on Tuesday, 9th February, the election to the Canadian Committee of the Hudson's Bay Company of J. W. McConnell and D. C. Coleman, both of Montreal, was announced.

Mr. McConnell is president of the St. Lawrence Sugar Refineries Limited and his directorships include the Bank of Montreal, Canadian Pacific Railway Company, Montreal Light, Heat and Power, Canada Steamship Lines, Ogilvie Flour Mills, Sun Life Assurance Company, International Nickel, The Royal Trust Company and other corporations. Mr. McConnell is a governor of McGill University and a member of the board of management of the Royal Victoria and Montreal General Hospitals.

Mr. D. C. Coleman is vice-president, director and member of the executive committee of the Canadian Pacific Railway Company. He has been with the C.P.R. since 1899 and has been closely identified with the operations of that Company in Western Canada. He is a director of the Metropolitan Life Insurance Company and the Canadian Marconi Company and has lived in Montreal since 1934.

The Canadian Committee is now made up of seven members and has, until the election of the two new members, consisted of: George W. Allan, K.C. (Chairman), James A. Richardson, R. J. Gourley, C. S. Riley and H. B. Lyall, all of Winnipeg.

The Royal Canadian Mounted Police Musical Ride that went to Cape York instead of New York

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EDITORIAL AND CIRCULATION OFFICES AT HUDSON'S BAY HOUSE, WINNIPEG

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HBC PACKET

Everyone interested in the story of the Company will wait with eagerness the working out of the plan for the publication of material from the archives. Under an arrangement made between the Champlain Society and the Company one volume will be issued each year as part of a "Hudson's Bay Company Series" to members of the society. The Company is to receive a limited number of volumes distinctively bound for its own use. Details of the plan are not completed yet but will be announced in *The Beaver* from time to time, and the annual volumes as they appear will, of course, be reviewed.

It is probably too late now ever to overtake the legend that the Hudson's Bay Company used to trade long barrelled muskets for beaver skins piled to the top of the gun. It is one of those fantastic tales repeated with knowing winks by ignorant persons—the sort to whom no public character can be virtuous and no corporation honest. Every few years a few sentences about this alleged basis of trade get into circulation in the United States and weary editors slap them into the bottoms of an unfilled column of type and go home for dinner. So the legend marches on. The truth is something quite different and some day we shall have an article for *The Beaver* on tariffs in the Indian trade since 1670, followed by more articles, scholarly and beautifully footnoted, by unprejudiced persons to tell the story of the relationship between the Company and the natives of Canada.

* * *

While writing of Indians there is an opportunity to quote a letter to the Governor from the Indians at Stanley in Northern Saskatchewan. Mr. Cooper contributed to the restoration and repainting of Trinity Church at that place and the following letter, written on birch bark, was forwarded to the Governor by Rev. H. E. Hives, Lac la Ronge:

"Honored Sir: We, the members of Amos Charles Band and members of Trinity Church at Stanley, wish to ex-

(*Continued on page 66*

Seal Hunting with Kubluk

By GEORGE COUTTS

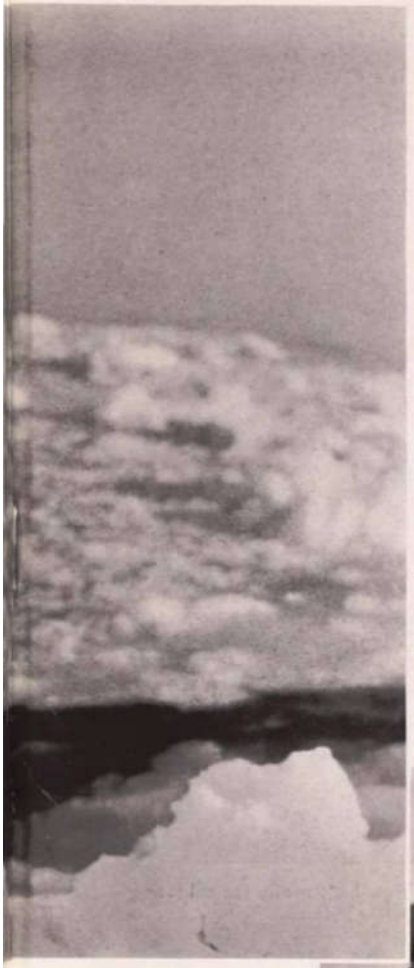
THERE are no Eskimos living south of Nonala on the west shores of Hudson Bay, but one named Kubluk came by chance out of the Far North to spend a winter at Churchill.

In September 1935 the Roman Catholic mission schooner *Pius XI* left Repulse Bay on her return trip to Churchill. She carried several passengers: Father Ducharme of the Chesterfield mission and two Eskimo families—*Kubluk, his wife, two children and three dogs; also Black Peter, his sick wife and two little girls. All were to be put ashore at Chesterfield Inlet. The weather was much too stormy, however, to make a landing there and, as the season was getting late, the little schooner wallowed on her way south to Churchill, where she was hauled out for the winter.

Kubluk built a dwelling for his family, half tent half dug-out, close to the mission, and there settled down to spend the winter as best he could. He was about forty-two years old and had been a great traveller in his time. His second wife, Ata-utya, came from Igloolik, a little Eskimo settlement far north on the east coast of Melville peninsula, and was therefore quite a stranger to civilization. The two children were †Natziak, a girl ten years old, and §Matuk, a boy of eighteen months. Having established his family in their crude but snug shelter, Kubluk prepared for whatever hunting might

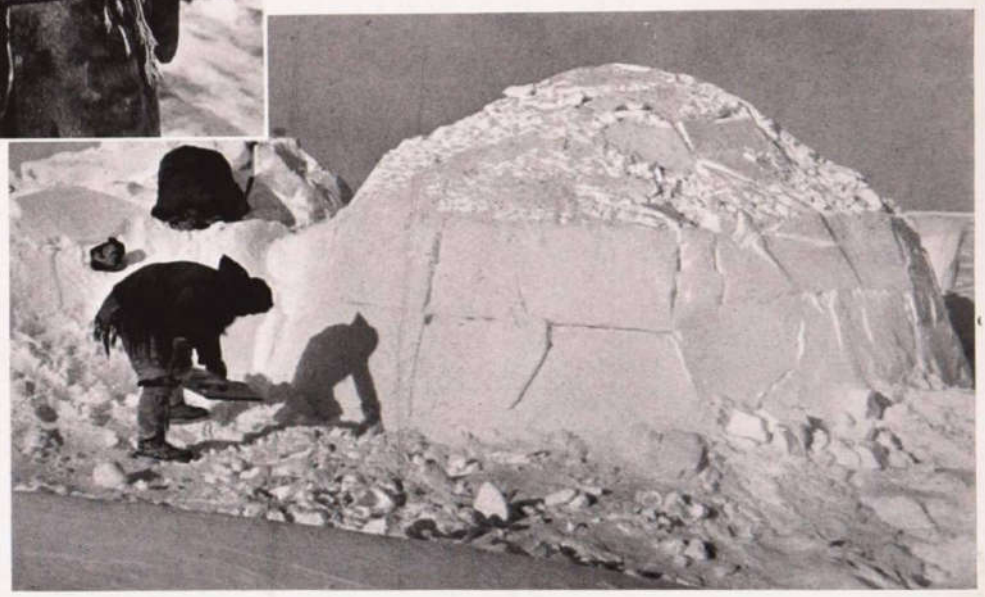
*Kubluk—the thumb; †Natziak—a seal; §Matuk—skin of a whale.

Engineer, Department of Railways and Canals, Churchill



A storm blew Kubluk and his family out of the North to spend an unexpected winter at Churchill seaport on Hudson Bay. Seal meat and oil is an essential part of the Eskimo diet, so Kubluk built an igloo out on the floe ice and went hunting, meeting with considerable success.

Above, left: Kubluk hauls his seal out of the water at the edge of the floe ice. The temperature is 25 degrees below zero and vapour rises from the open water. Below: Kubluk attending to the flame of his seal oil lamp inside the igloo. Above, in circle, Kubluk, who arrived so unexpectedly at Churchill.



The igloo out on the floe at North-West river after the double wall had been built ready for colder weather. Above: The author in his caribou skin parka.

Early in February the weather turned mild and a fair west breeze opened up the ice beyond the land floe opposite Button Bay. Kubluk decided that now was the time for the long-deferred seal hunt. Father Ducharme, who was going with him, invited me to join them, but suggested that I wait for the second trip, as the komatik would be too fully laden the first time to take my equipment. Kubluk had only three dogs as yet, and they had a good load to haul over a long stretch of hummock ice which fronted the shore of Cape Merry from the mission to the mouth of the Churchill river.

On February 6 they started off. The morning was fair, 8° below zero, and a fifteen mile westerly breeze. The Eskimo had lashed his little boat on the sled and filled it up with the rest of the gear, which included caribou skins, sleeping bags, clothing, two rifles, two primus stoves, coal oil, grub, snow-knives and shovel, also about a dozen traps. They realized that they might have to go out about twenty miles before finding a suitable place to camp on the ice, as the land floe is dangerous near the mouth of the Churchill river, sections of it breaking off frequently through the action of the wind and strong current. Conditions would likely be safer on the long tide flats opposite North river, and this is where a little snow house was built in the gathering darkness of the first day.

Two days later the hunters returned with their first catch. Kubluk had shot two seals, set out seven or eight fox traps, and then lost no time in getting back to his waiting family. There was much jubilation in the Eskimo camp when the komatik drove in. Even Black Peter was shaken out of his taciturnity, and Ata-utya (Kubluk's wife) ran out to help unload, while the children danced with joy at the immediate prospect of having their stomachs filled with seal meat. For nearly six months they had been without this form of food, which is so essentially a part of the Eskimo diet.

be found at Churchill, built a komatik for his dog-team and then set to work on a small boat for seal hunting on the bay. I first met him when he was working on material for the floe-boat. With a small Quebec heater going the dwelling was warm, and Kubluk was sweating profusely at his work, which was sawing away vigorously at a full inch board, clamped on edge, to make two thin boards out of it so that the boat would be as light as possible.

There was little prospect of any seal-hunting until the days lengthened in February, or until there should be better weather with some sign of openings in the bay ice north of Churchill. January was a very cold month, with the temperature averaging 30°, and indeed there was a period of about two weeks when the average was 40° below zero.

February 12 opened fair and mild, 10° above zero, and I was up at six a.m. to go with Kubluk to the hunting ground. The boat had been left at the igloo along with some of the first load and there was room on the komatik for my outfit. About 11 a.m. we stopped at the half-way mark, a couple of blocks of snow set up and shaped with the snow-knife the previous Friday. In ten minutes or so, refreshed by a cup of tea and a few crackers, we were on our way again. Kubluk urged his dogs off with a grunt and a sharp "Aouk, aouk." He seldom used the long whip, but when necessary picked out the laggard dog with unerring aim.

Kubluk cutting up seal beside the igloo.

Kubluk paddling back to the ice towing a seal behind his boat.

It was an exceptionally fine day for February. The ice had opened up over the week-end opposite Button Bay, and the trail led along by the water's edge for over a mile. The sound of the komatik on the ice attracted the attention of the ever curious seal and a couple of sleek black heads appeared above the surface.

The edge of the lead now curved away to the north-east and the trail led on towards a high hummock of rafted up ice which marked the south shoal of the North river channel through the tide flats. About two miles north of this another hillock of piled ice could be seen in the distance. Somewhere in between, and half a mile east of the first big hummock, lay the igloo, an insignificant little mound built about four hundred yards back from the edge of the land floe.

We reached the igloo at 2 p.m. and Kubluk immediately got down to business. After unloading the komatik he lashed his boat on it while the Father and I packed the stuff into the little snow house. He took along his rifle, hunting knife and a few traps, growled to the dogs, and set off north over his trap line. At this time, although the brief run of white fox around Churchill appeared to be over, tracks in the snow out here showed there were yet some foxes in the country.

It was obvious that the igloo was too small for three to occupy, so we two white men set about building an addition to it. Father Ducharme was experienced at this work and we could get along well enough until the Eskimo returned. We were struggling along with the third tier, leaning in now towards the ultimate top, when we saw Kubluk returning through the hummocks. He had no luck to report from his trip, and with a throaty remark or two set to work to finish off our igloo. In half an hour the job was done.

It was now almost dark, the dogs were quiet, and the hush of the subarctic night had settled down over the wilderness of snow and ice. We were all hungry, having had nothing since our early breakfast but tea from a thermos flask on the trail. Candles had been lit and the two primus stoves were going full blast in the little igloo, snow melting in the tea-pail over one and

the bannock being made in the frying pan over the other. When three bannock had been cooked and a big can of pork and beans heated up, Kubluk took the pan and fried some bacon. As he cheered up a bit he burst into song, which went something like this:

"Igayeovok mamurtuliorpok,
igayeovok mamurtuliorpok,"

the gist of this being that "the good cook is making good cooking." Dinner was served now and we set to with a will. When he had cleaned up the last of the beans the Eskimo tried the oatcakes, apparently the first time he had eaten this form of white man's food. He approved of them thoroughly and said that they were good to carry as they had not frozen on the way.

Supper over, Kubluk lit a cigarette and washed up. This job merely consisted of scouring the frying-pan and enamelled plates with snow and a doubtful looking rag, then digging the knives and forks into the snow floor. These were put away by sticking them in the snow wall above the primus box. The roof inside the little igloo had become iced over with the occupation last week and the odd drip of water fell down. This was taken care of by sticking a small piece of snow up against the offending part where it absorbed the drip at once. As Kubluk had built this igloo only high enough for himself, it was a foot too low for me, so I crawled into the new one and found I was able to stand upright.

But work had to be done yet to get this place ready for the night. Candles were placed in it and the primus stove carried through to warm it up. A visit outside showed light shining through several chinks, which we plugged up with snow. The floor was soon made ready, skins spread over it and we snuggled down inside our sleeping robes for the night.

Kubluk coughed frequently and smoked one or two cigarettes, which made him cough still more; otherwise I think I would have slept better than I did. About 6 a.m. he figured it was time to get up, light the primus stoves and start preparations for breakfast. The Father and I crawled out of our sleeping bags when we heard him singing "Ya-ya-ya-ya-ya-ya," and realized that the bannock was now ready. We rolled up the bedding and cleared a space for the meal. Breakfast was over about 7.30, the snow block was moved from the doorway and we crawled out into the light of day.

We had no luck hunting this morning, and returned to camp for lunch. Father Ducharme suggested that we spend part of the afternoon improving our igloo while Kubluk went off with the komatik to check over his traps and set a few more out south of camp, then he would follow the floe edge back again. With the prospect of colder weather after the mild spell it was advisable to make the igloo warmer by banking up the wall outside. This was done with two rows of snow blocks built up and backfilled with loose snow. Above this snow was shovelled up to cover all but the top of the dome.

Carrying a rifle, perhaps for self defence against a stray polar bear, I made my way back to the floe edge about four o'clock. Approaching the lee of a rough promontory of piled up ice, I saw some eider ducks on the water. Creeping up cautiously I was surprised to hear the snap of a "twenty-two." Three times the hidden marksman fired and, with much splashing and a whirr of wings, all but two of the ducks were gone. I came up just as Kubluk launched the little boat to get

Father Ducharme meets the boat at the edge of the land floe. Note the huge mound of ice in the background.

two ducks he had shot and helped him haul it up again. He seemed rather pleased with himself and, grinning broadly, showed me the results of his lone afternoon's hunt—a ringed seal, and a white fox which he had found in the last trap on his line.

Sun had set now and it was time to head back to camp. With a guttural "Uit" from their master, the dogs started off and I trudged along behind the komatik. Kubluk had skinned the seal directly after the kill, and on arriving in camp cut up some meat for his dogs, their first feed for two days. The liver, heart and some choice (?) portions of the meat he took into the igloo, along with some fat for the seal oil lamp.

We had a fine supper that night. The little Father had preparations well on the way and was cooking the third bannock. The Eskimo skinned a duck just enough to cut out the breast and this was fried up along with some slices of seal heart and a few pieces of the meat. They thought I might not like this "fricassé à l'Esquimau" and threw some strips of bacon on top of the mess, but I was as "hungry as a hunter" and enjoyed the products of Kubluk's hunting skill as much as the other two did.

Our living quarters were now established in the larger igloo and the little old one became a useful passage to the outer doorway. Kubluk now melted some of the fat and got his seal-oil lamp going, a most interesting piece of business. With the lamp burning, the igloo soon warmed up, intensifying the mingled odours of seal and Eskimo. Sleeping bags were rolled out and we turned in about nine o'clock. I lay in the middle between the two smaller men, feet to the wall and head towards the door, which was sealed up tight with the snow block. For a while, with the light from the seal-oil lamp over my left shoulder, I lay there reading a two-weeks old newspaper. During the night Kubluk coughed occasionally, and I vaguely realized that he was attending to the lamp in his waking moments.

Thursday morning, zero temperature, and a fresh west wind blowing the drift. It was clear overhead, but conditions did not appear to be "good for the floe." This turned out to be so, as we spent a fruitless cold forenoon along the edge of the ice with nary a sign of seal. With a grunt of disgust, Kubluk at last gave up and, growling to his dogs, started off at a good pace towards camp. We followed back more leisurely and I learned that the Eskimo intended to pick up a couple of traps and strike off at once along the north half of his trap-line. He had the thermos flask with him and would not stop for lunch.

We spent a quiet afternoon in camp and started supper preparations early. I thought it was up to me to make the bannock this time, and was afterwards rewarded for my efforts with permission to sing the cooking song "Igayeovok." While at the stove and talking to the Father, I learned that the Eskimo called me "Kakeeverut," meaning the short-haired one or one with the small moustache, a tonsorial description which covered the difference between myself and the other two.

It was now getting dark, and still no sign of Kubluk. Father Ducharme was preparing a flare of sacking soaked in oil, and was just going to light this beacon when he heard Kubluk urging his dogs. The komatik soon crunched to a stop in front of the igloo. He told the Father that he had been engaged stalking a "small" seal which he had shot lying beside its hole through the ice, and had cut up and left half of it to be picked up tomorrow. I saw the huge quarters of frozen hide next day with two inches of fat. The seal must have weighed over five hundred pounds. This was Kubluk's "small seal"—a large bearded "square flipper."

Friday morning opened cold, 30 below zero, with a twelve-mile breeze from the west. Looking around, the Eskimo spoke and pointed northerly. The Father nodded and said to me, "It will be good for the floe today." A fog bank or pall of heavy mist indicated the presence of considerable open water.

A brief discussion ensued, and Kubluk struck off alone with the boat on his komatik to follow a good road for the dogs. Carrying our rifles, we headed north through the hummocks to strike the edge of the land floe near the foot of a huge mound of ice. We reached this place ahead of the Eskimo and took up positions to watch for seal. The water was calm in the lee of the collar ice, with skin ice forming in the little bays. Grey vapour curled up from the surface beyond to form the cloud of mist seen from the igloo.

Kubluk now came through the rough ice a little to the south and stopped the dogs. I lost sight of him for a moment, but heard his rifle crack as a seal's head showed up near his position. Seeing the boat launched, we realized that his aim had been good. He paddled out about twenty yards, slipped a line through the nostril of the floating seal, and towed it back to the ice. At this time of the year the seal is fat and floats in the cold water. In spring and summer they sink almost immediately and have to be speared or harpooned.

No more seals showed up here during the next half hour, so we moved along to a fresh location. The Father and I climbed over the shoulder of the big knoll of ice, but Kubluk had to take the komatik out the way he had come and around by an easier road. Consequently we came down to the water's edge ahead of him again.

We stationed ourselves about one hundred yards apart on each side of a little bay. Kubluk soon came along and rumbled to a stop about midway between us. He picked up his rifle and crouched down promptly as a sleek black head broke the surface immediately. Taking quick aim with the "22" he shot the seal. Kubluk seemed to know full well that the noise of his komatik approaching the edge would probably bring up an inquisitive seal, but it seemed uncanny to me how it happened. We had not been quite close enough to see all the first performance an hour before, but this time he had the laugh on us as he repeated the trick right under our guns.

And then Kubluk beat me to it! I had gone back to my post behind a saw-tooth section of ice jutting up at the water's edge when another seal poked his head up about one hundred yards out. Taking hasty aim with the old rifle, I missed. However, Mr. Seal still wanted to find out what all the disturbance was about and showed up again about forty yards away, but a little nearer the Eskimo. As I took aim again the "22" cracked, and I realized that Kubluk had got my seal. I think he had an idea, and perhaps he was right, that his white companions were poorer shots, and decided he had better make sure of his meat.

After the business of getting this one out, another ringed seal about one hundred pounds, we felt it was time for a cup of hot tea from the thermos flask. This was a cold job waiting for seal in the raw air by the open water with the temperature about 25 below zero, and my feet were cold, notwithstanding the polar bear hide on the soles of my "kamiks." It was all in the day's work for the Eskimo, *(Continued on page 61*

"The Executioner of John the Baptist." Mezzotint by Prince Rupert, 1658, after the painting by Ribera. This mezzotint is generally known as "The Great Executioner" and was the first mezzotint produced in England.

Art in the Archives

By
W. J. PHILLIPS, R.C.A.

The Company has been consistent in its sympathetic regard for art and artists and some of the early pictorial records of the scenery and aborigines of Canada are the work of men of the Hudson's Bay Company.

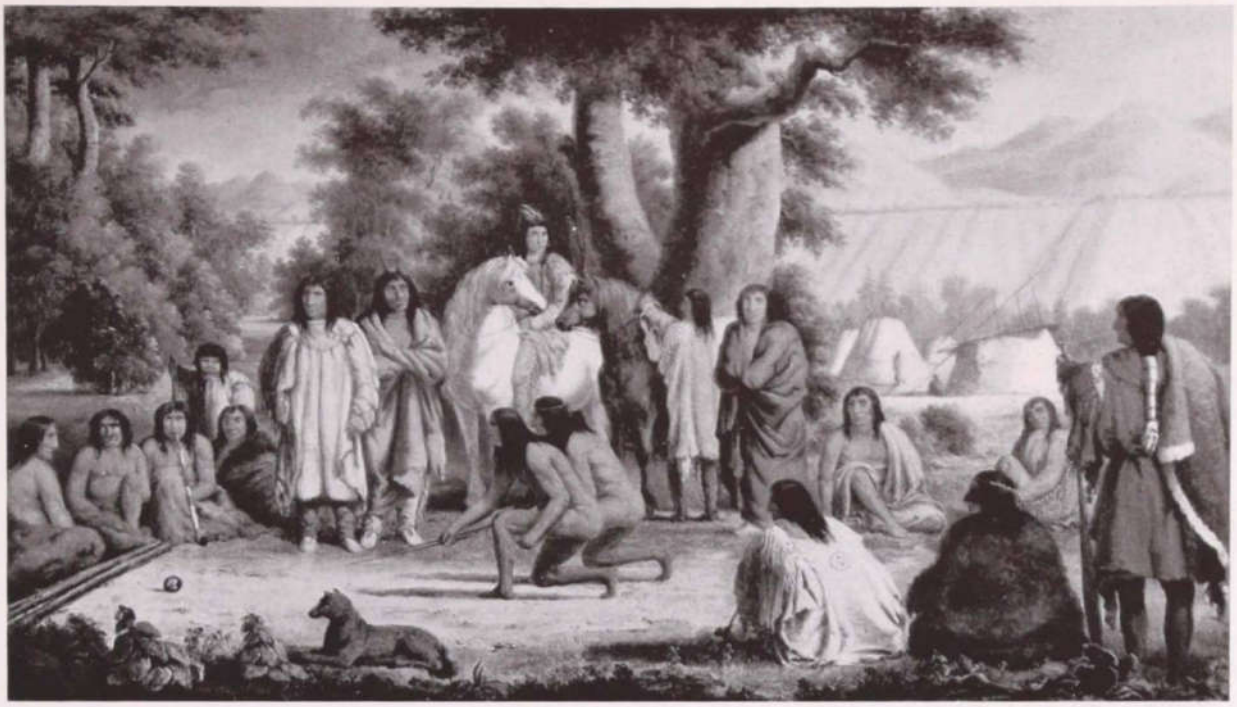
PICTORIAL art, as we understand it, is essentially a product of civilization, associated with leisure and cultured ease, with elegant houses, churches, and public institutions. It has been fostered by church and state, prince and potentate, and latterly by every man with walls to decorate. But one hardly expects to find numbered among the friends of art a great trading company whose territory lies beyond the frontiers of civilization. It is a fact, however, that the Hudson's Bay Company has been consistent in its sympathetic regard for art and artists. It may be that a tradition was founded by Prince Rupert, the spiritual father of the Company, who was not only a patron of art but an artist in his own right. He made a number of masterly mezzotints, the best of which is the large "Executioner," and introduced that delightful art into England. It was once supposed that he invented it.

This is a brief account of three men who at a later date made pictorial records of the scenery and the aborigines of Canada. Two of them were in the Company's service, and one of these was required to embody such drawings in his periodical reports.

The third was Paul Kane, whose "Wanderings" were advanced by the resources of the Hudson's Bay Company. He spent nearly three years on one journey to the west coast and back, and the rest of his life in writing up his experiences and in working up his drawings. Surely that was the grandest sketching trip ever made. His book makes good reading, even though it is stilted in style and a trifle impersonal.

Kane set out on his travels from York (Toronto) in 1846, taking advantage of Sir George Simpson's offer of a place in the spring brigade of canoes. He faced a long, arduous and dangerous journey—a journey which is a matter of a day or two now, passed without incident in the utmost comfort, but one that was a matter of months in Kane's time, months of hardship such as we can scarcely conceive. Water, fire, cold, heat, hunger, wild beasts and barbarians made life interesting but hazardous. "Tormented by mosquitos" is a recurrent phrase in contemporary diaries.

Kane was a man with a mission. After a hardly earned period of education in art in Europe, he returned to York obsessed with the idea of painting Canada, its Indians and scenery, devoting, as he solemnly declaimed, whatever



Indians Playing at Alcolah. By Paul Kane. (Courtesy National Gallery of Canada.)

Scalp Dance by Spokane Indians. By Paul Kane. (Courtesy National Gallery of Canada.)

talents and proficiency he possessed to that end. Whilst travelling he was severely handicapped—he could sketch at portages and encampments, if the weather was favourable, if there was anything to sketch, if the mosquitoes and flies were not rampant, if there was time enough, or if he felt like it. I cannot make up my mind whether he was as industrious as he might have been considering the magnitude of his task. Too frequently he makes notes of this type: "We fished and hunted for fourteen days, almost unconscious of the lapse of time so agreeably spent." He was, I suppose, subject to moods like most of us. No sketcher could be keener than he was on occasion. Consider the famous passage describing the incident of the buffalo hunt:

"I again joined in the pursuit; and coming up with a large bull, I had the satisfaction of bringing him down at the first fire. Excited by my success, I threw down my cap and galloping on, soon put a bullet through another enormous animal. He did not, however, fall, but stopped and faced me, pawing the earth, bellowing and glaring savagely at me. The blood was streaming profusely from his mouth, and I thought he would soon drop. The position in which he stood was so fine that I could not resist the desire of making a sketch. I accordingly dismounted, and had just commenced, when he suddenly made a dash at me. I had hardly time to spring on my horse and get away from him, leaving my gun and everything else behind.

"When he came up to where I had been standing, he turned over the articles I had dropped, pawing fiercely as he tossed them about, and then retreated towards the herd. I immediately recovered my gun, and having reloaded, again pursued him, and soon planted another shot in him; and this time he remained on his legs long enough for me to make a sketch. This done I returned with it to the camp, carrying the tongues of the animals I had killed, according to custom, as trophies of my success as a hunter."

His approach seems to have been confident and courageous enough; perhaps we should absolve him from the sin of idleness. His worst troubles were connected with his portrait studies. The Indians were not always helpful. He recounts a typical meeting with a band of Salteaux on the shores of Lake Winnipeg. "The Indians," he wrote, "crowded round the boat on our arrival, inquiring what we wanted. Our interpreter told them that I had come to take their likenesses. One of them, a huge ugly-looking fellow, entirely naked, stepped up telling me to take his, as he was just as the Great Spirit had made him. I declined however, as I wanted to sketch one of the females; but she refused as she could not dress herself suitably for such an occasion, being in mourning for some friends she had lost and therefore only wearing her oldest and dirtiest clothes. After some difficulty I succeeded in getting a young girl to sit in the costume of this tribe, although her mother was very much afraid it might shorten her life. But on my assuring her that it was more likely to prolong it, she seemed quite satisfied. After finishing my sketch, which they all looked at in great astonishment, a medicine-man stepped up and told us he would give us three days' fair wind for a pound of tabacco."

Frequently he would enter a lodge, sit down, say nothing, and begin to sketch. His subject was bound by politeness to feign indifference; he also would continue to sit and say nothing. He used this technique on To-ma-kus, a villainous brute who afterwards murdered Dr. Whitman. Here is the story:

"Dr. Whitman took me to the lodge of an Indian called To-ma-kus, that I might take his likeness. We found him in his lodge sitting perfectly naked. His appearance was the most savage I ever beheld, and his looks, as I afterwards heard, by no means belied his character. He was not aware of what I was doing until I had finished the sketch. He then asked to look at it, and inquired what I intended doing with it, and whether I was not going to give it to the Americans, against whom he had a strong antipathy, superstitiously fancying that their possessing it would put him in their power. I in vain told him that I should not give it to them; but not being satisfied with this assurance, he attempted to throw it in the fire, when I seized him by the arm and snatched it from him. He glanced at me like a fiend and appeared greatly enraged, but before he had time to recover from his surprise I left the lodge and mounted my horse, not without occasionally looking back to see if he might not send an arrow after me."

But bad Indians were not the only bad medicine Kane encountered. On one occasion he was finishing a sketch in his tent by candle light, when suddenly a husky invaded his privacy and bolted with the candle. Starving Indian dogs were often a decided menace.

One morning, whilst sketching near Victoria, he saw upon the rocks the dead body of a young woman whom he remembered having seen walking about in good health a few days previously. She was a slave and had been murdered by her mistress—or sacrificed, which is much the same thing—and, since slaves were denied the right of burial, had been thrown to the crows and the vultures. But what a sight to greet an amiable and innocent drawing master.

Kane made less than four hundred sketches in oil and water colour and in line. Not a heavy bag, but it presented problems in transportation on the return journey. Negotiating swollen rivers was not an easy job, when even the horses had to swim. His packs were carried on the shoulders of the horsemen, for they must be kept dry at all costs.

Mah-min, head chief of the Assiniboines, rated Kane a greater chief than he was, in consideration of his skill in portraiture, and presented the artist with the local alternative for a medal—a bear's claw necklace. He thought Kane was a great painter. How do we regard him?

Paul Kane has a place in Canadian art, and it is secure because of the anthropological and historical aspects of his work. Considering him only on his merit as a painter, we employ adjectives bestowing faint praise. He viewed the Canadian scene through European glasses. We look in vain for the clear atmosphere and pure colour of the West. His foreground vegetation, moreover, is hardly characteristic. His braves pose in the manner of antique Greek statues; his mustangs are Arabian steeds. Even his buffalo are not convincing. Charles Jefferys, however, says his work has considerable artistic merit, and, anyway, is vastly superior to the diagrams of his famous contemporary, George Catlin.

Paul Kane's work may be seen in quantity in Toronto. Some years ago a collection of about a hundred of his sketches was exhibited at the art gallery in Winnipeg, an event the importance of which was not recognized by the citizens. These sketches belong to a branch of the family then resident in the city.

The ability to sketch is of tremendous importance to the traveller, or to any who desire to make records of

Blackfoot Chief and Subordinates. By Paul Kane. (Courtesy National Gallery of Canada.)

their observations. A deluge of words ultimately fails in the description of objects and scenes which a drawing describes perfectly. Only in sequences of action is the written word superior. And this is why the modern explorer seldom forgets to include a camera in his equipment, whether he can draw or not.

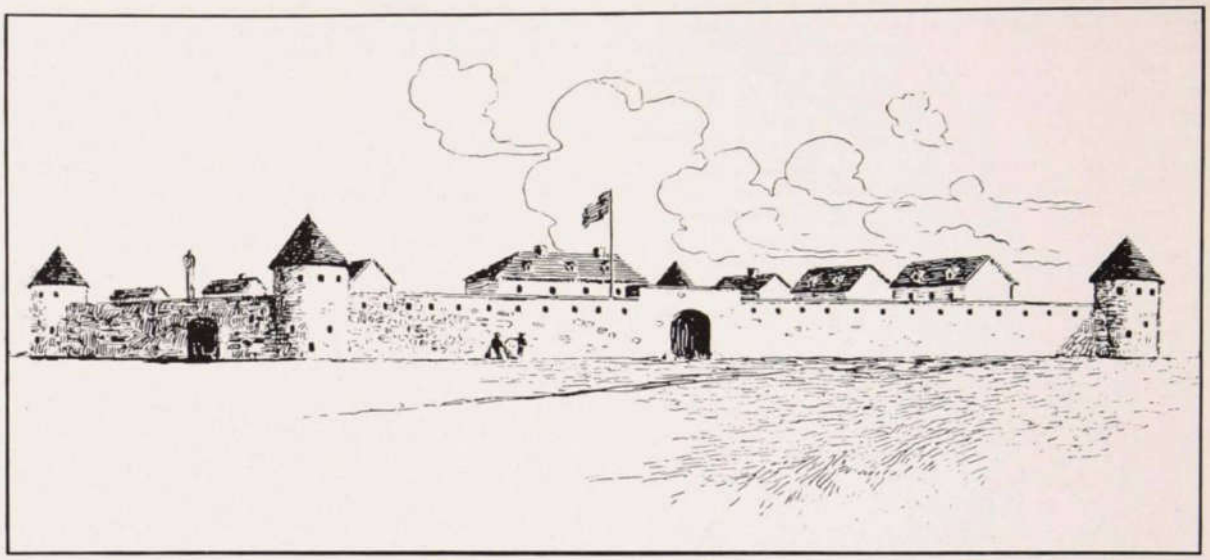
The camera does not necessarily supersede the pencil. In many situations the pencil is the best because it is wholly selective and discriminating.

Early travellers in Canada for the most part summarized their observations in few words unadorned by either rhetoric or picture. There were some notable exceptions: Paul Kane, who, as we have seen, made only one long journey but gathered sufficient material thereon to serve as a basis for all the paintings of his after-life; R. M. Ballantyne the author; and Alexander Hunter Murray, whose considerable ability as a draughtsman seems to have been devoted entirely to the service of his employers, the Hudson's Bay Company.

Murray made drawings of the trading posts at which he was stationed and which he visited, of Indians, and of landscapes bearing on the geography of the land, particularly of a new trail. Apparently he had no ambition to pose as an artist. He merely employed his pencil incidentally in the interests of his work.

In the preamble to his "Journal of the Yukon," an account of an arduous trip undertaken in 1848 for the purpose of establishing a trading post in the interior of Alaska, he wrote: "You also requested me to send you some drawings of the country, and as now I am altogether unprovided with either drawing paper or pencils and cannot comply in full with that request, a few steel pens now going on their third year, and filed down to stumps, are all my store, and cannot answer for every purpose, and to 'do up' a landscape with them is beyond my humble powers. Therefore you must be content with the few rough sketches that may be interspersed throughout these pages."

Nevertheless his drawing, "Ramparts on the Porcupine River," is a well executed landscape giving every indication of topographical accuracy. "Crossing Bell River" depicts the difficult fording of a stream in flood on which the ice is moving; the three struggling figures give scale to the landscape; it is an excellent sketch. These, with other landscapes including views of Fort Yukon, and a number of sketches of aboriginal Indians



Upper Fort Garry. By Alexander Hunter Murray

showing plainly their types, costumes, arms, facial decorations and so forth, do not give the impression that the artist was handicapped by the inadequacy of his materials.

His line remains confident and secure. A drawing such as "Dance of Kootcha Kootchin," involving a large number of figures in very odd poses, is really remarkable in that each line is direct and never tentative and in that the artist has no chance of erasure.

A perusal of the journal convinces one that even a complete sketching outfit would not necessarily make sketching a pleasure on the Yukon. Hunter's meteorological records indicate a climate far from equable. In winter sketching was entirely out of the question, and in the brief summer insects made life unbearable. Some idea of how bad they were may be derived from the extract which follows:

"I have been in the swamps of Pontchartrain. and the Balize along the Red River (Texas), and most parts of Gullinipper country, but never experienced anything like this. We could neither speak nor breathe without our mouths being filled with them, close your eyes and you had half a dozen, fires were lit all around, but of no avail. Rather than be devoured, the men, fatigued as they were, preferred stemming the current a little longer, to reach a dry and open spot a little further, of which the Indians informed us. Another half-hour's tugging brought us to, and we encamped on the banks of the Yukon.

"I must say, as I sat smoking my pipe and my face besmeared with tobacco juice to keep at bay the d—d mosquitos still hovering in clouds around me, that my first impression of the Youcon was anything but favourable. As far as we had come (2¼ miles) I never saw an uglier river, everywhere low banks, apparently lately overflowed, with lakes and swamps behind, the trees cut too small for the building, the water abominably dirty and the current furious; but I was consoled . . ."

It is possible to become so absorbed in one's sketching that the worst efforts of a few ordinary mosquitoes go unnoticed. I have worked with the back of my hand black with them, but they were not Gullinippers, whose voracity, I understand, will worry a bear to death.

Though conditions were so very unfavourable, at least his sitters were willing. The Indian of that time was, of course, ignorant of the commercial possibilities of posing. De Grandmaison tells me he has to provide hundreds of presents in order to induce his models to sit, and James Henderson deplores the fact that amateurs invade his hunting grounds and demoralize his subjects by the offer of lavish rewards for their services.

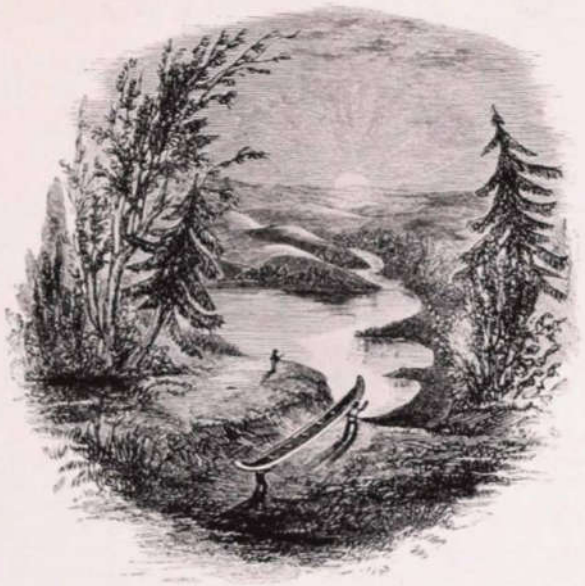
Murray wrote, "Saveeah, the principal chief of the Kootch-Kootchin, was present while I was sketching the others, and remarked that he did not see himself amongst them. I offered to take his likeness to send to the Great White Chief, and he has been sitting for the last half-hour with his best face on. He is mightily pleased with his own appearance on paper, although I have made a complete botch of it, except the mouth is not unlike."

No one can deny that Murray's spirited sketches add to the clarity and interest of his journal and justify my contention that ability to express oneself in this manner is a valuable accomplishment. That Murray could produce a finished picture of the topographical order, replete with life and incident, given more responsive material to work with than the mere stub of a pen, is evident from his "York Factory," which was reproduced in *The Beaver* a few months ago. Considering the circumstances, he did as well as Kane, and deserves a place hardly inferior in the annals of Canadian art.

Among the artists and amateurs who sketched in Canada a hundred years ago, and whose work, incorporated in books, served to enlighten those who did not travel, R. M. Ballantyne cannot be overlooked—

Ballantyne, the author of "Ungava," beloved by the youth of many generations. He did not possess the facility of either Kane or Murray, but he had an eye for beauty in nature and some ability in portraying the things he saw in the strange new world—enough, at any rate, for the wood engraver to work over when he made the cuts for "Hudson's Bay."

He made a picture of the square-rigged ship that brought him safely over the ocean; and the perilous nature of the passage is indicated by two huge icebergs in close proximity. He pictured the birch-bark canoe, leggings and moccasins, an Indian head-dress and a papoose, snowshoes and carrioles, somewhat diagrammatically. He is a little more pictorial in his treatment



View from Dog Portage. Engraving from a painting by R. M. Ballantyne.

of the buffalo hunt, of a canoe running a rapids, of travelling with a dog-carriole, and of the view from the height of land at Portage du Chien. But his best effort is the frontispiece depicting an "Incident in Carriole Travelling"—sleigh upset, the passenger half buried in a snowdrift, and the guide on snowshoes whipping the fighting dogs. In the background are fine pines, the like of which are uncommon now since all have fallen to the lumberman's axe, and beyond them a Hudson's Bay trading post, with smoke cheerily belching from each of its three chimneys.

Ballantyne arrived at York Factory on Hudson Bay in August 1841, and three weeks later left with the Portage la Loche brigade for the Red river. A year later he returned to the sea, and subsequently suffered the long journey to Tadoussac by way of the Great Lakes. But the first inland journey pleased him most. He described it as the happiest time he ever spent in the Nor'west.

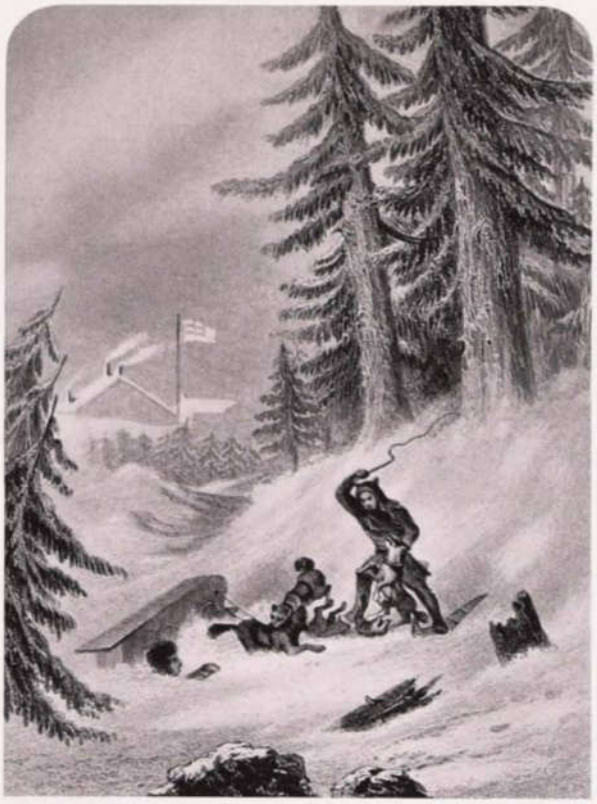
Why indeed should he not have enjoyed it? Everything seemed full of novelty and excitement to the young apprentice clerk. "Rapid succeeded rapid, and portage followed portage in endless succession . . . . The weather was beautiful, and it was just the season of the year when the slight frost in the mornings and the evenings renders the blazing camp-fire agreeable and destroys those little wretches the mosquitos." His older companions were agreeable and indulgent.

While the "wild and uncouth" voyageurs dined on robbiboo, he feasted on hams, cured buffalo tongues, tea, sugar, butter, and biscuit, even a little brandy and wine "wherewith to warm us in cold weather." And he rested in a tent in comfort, whilst the crews rolled themselves in blankets and slept under the stars. He had no responsibilities, and at the portages would range around and shoot or swim or sketch. He thought the scenery pretty and romantic.

"Few things are more beautiful or delightful than crossing a lake in the woods, on a lovely morning at sunrise. The brilliant sun rising in a flood of light, pierces through the thin haze of morning, converting the countless myriads of dew-drops that hang on tree and bush into sparkling diamonds, and burnishing the motionless flood of water, till a new and mighty firmament is reflected in the wave—as if Nature, rising early from her couch, paused to gaze with admiration on her resplendent image, reflected in the depths of her own matchless mirror.

"The profound stillness too, broken only by the measured sweep of the oars, fills the soul with awe; whilst a tranquil but unbounded happiness steals over the heart of the traveller, as he gazes out upon the distant horizon, broken here and there by small verdant islets, floating as it were in air. He wanders back in thought to far distant climes, or wishes mayhap, that it were possible to dwell in (*Continued on page 61*

Incident in Carriole Travelling. Engraving from a painting by R. M. Ballantyne.



Barren Land Bugs

1

1. Pools like this among the rocks of the shore were alive with insects and crustaceans. 2. Decumbent and wind blown black spruce of the tundra. These trees had no limbs on the north and the clumps were heavily infested with spiders. 3. A little lavender flower was the first to bloom in the spring.

2

WHOEVER christened the tundra the barren lands could not have been an ornithologist, botanist, entomologist, or naturalist at all. Even a dendrologist would have found something of interest in the dwarf trees. The barren lands about Churchill, Manitoba, are anything but barren, for they are nearly tropical in the abundance of life that is present. Only the reptiles are apparently lacking.

I spent June and July of 1936 studying the insects and arthropods (jointed animals) of the region around Churchill and was appalled by the abundance. There were not as many species in evidence as farther south, but the numbers of individuals made up what the numbers of species lacked.

After examining the country, I recognized from twenty to twenty-five different habitats in which the invertebrates were living. These may, of course, be divided into aquatic and terrestrial habitats. The largest aquatic habitat was the Hudson Bay, but, as it takes special equipment for a study of marine invertebrates, no attempt was made to collect them. During a trip on the ice patrol boat, the *Ocean Eagle*, numerous large jelly-fish, six to eight inches in diameter and brilliant greens and blues, were seen floating at and just under the surface of the water. It was estimated that there were from four hundred and fifty to five hundred of these per square mile.

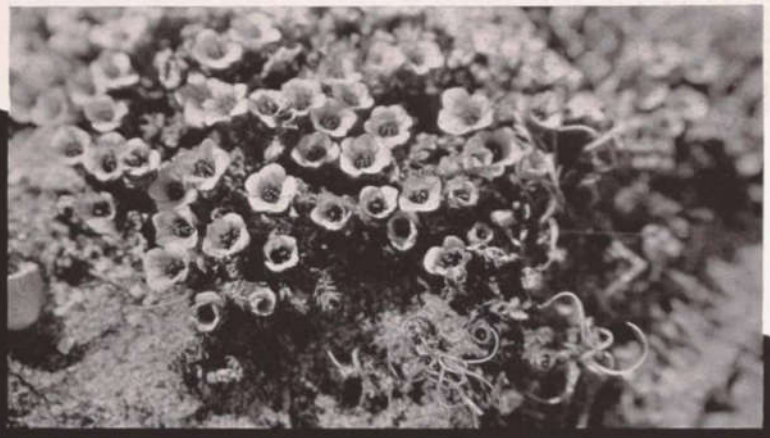
The shore of Hudson Bay for miles north and south from Churchill is precambrian granite alternating with sand and gravel beaches. As the tides rise and fall as much as fourteen feet, each of the sand beaches has a tidal flat of varying width strewn with rocks and boulders. When the tide was out small shrimps could be found under almost every pebble, so that they averaged from one hundred and fifty to two hundred to a square foot. These swim actively on their sides or backs when disturbed and are called sea lice by the trappers. They are said to strip the bones of any dead animal clean in a very short time.

Going up the beach from the tide flat, we come to an area of drift-wood and kelp which has a fauna all its own. Under the rotting kelp may be found hundreds of large brilliant red mites which probably feed on the decaying juices. These run very swiftly, and average fifty to a hundred per square foot. In the piles of kelp are found fly maggots which feed upon it and turn into one of the common gray flesh flies. They also become quite abundant and are found by the hundreds in each square foot of debris. Under the drift-wood are occasionally found ground beetles, burial beetles, and a few others.

Farther up the beach is an area of low, scattered, bunch-like weeds with small yellowish green flowers. Only a few insects are found associated with these, but on the sand, hiding among the bones and stones, are found large gray running spiders. These eat the flies and insects that alight upon the sand, and capture them by pouncing upon them. The area of bunch weeds

By
H. ELLIOTT McCLURE, M.Sc.
Peru, Illinois

The insect life of the so-called Barren Lands is staggering in its abundance. In pools of water anything up to 100,000 animals to the cubic foot are visible to the naked eye, and life is almost as abundant in the tundra mosses, in the trees and on the tide flats of the coast.



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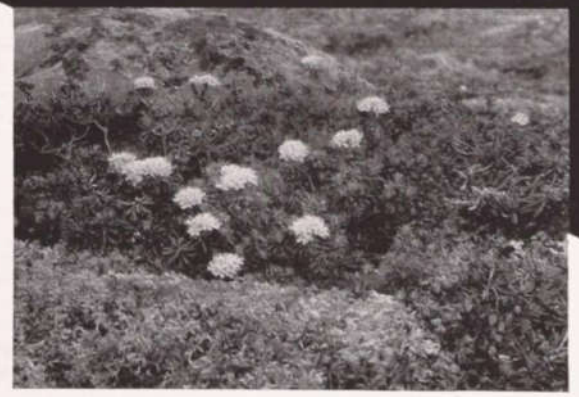
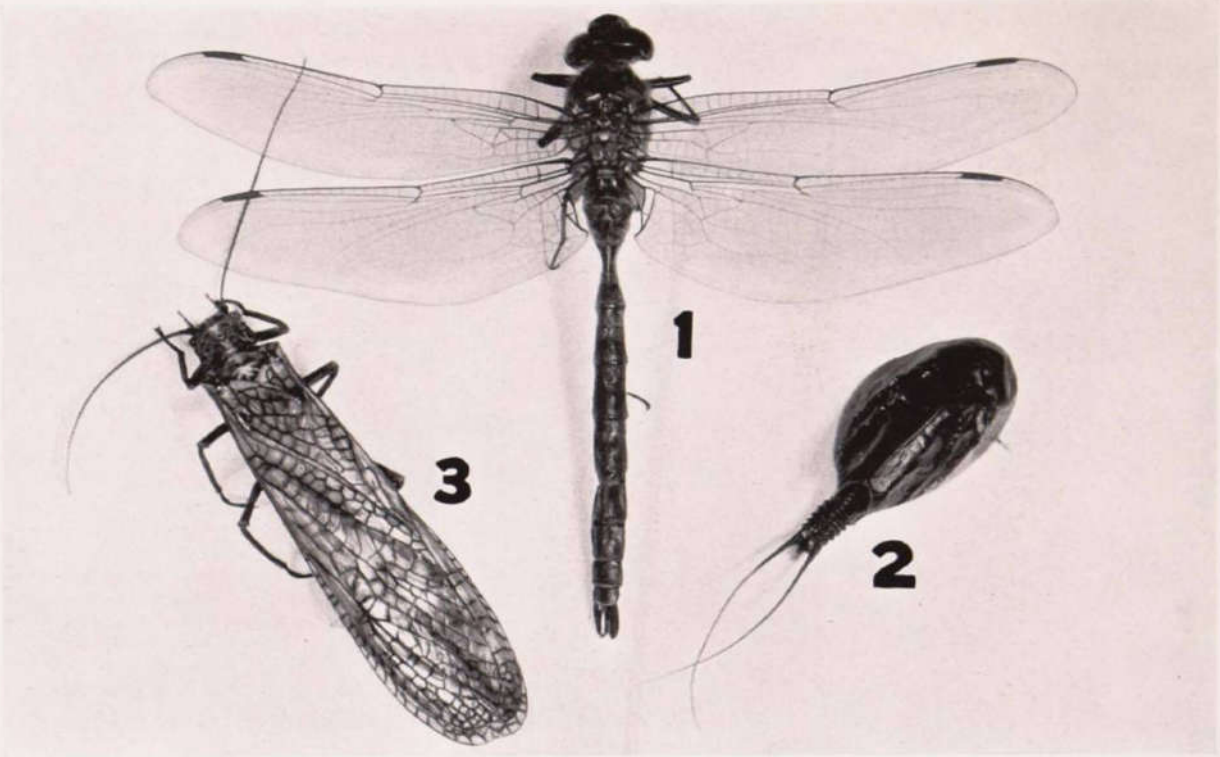
4

4. *A* panorama of the tundra showing the numerous small lakes. Although this picture was taken in June there are still snow banks at the foot of the hill.
5. *A* bit of tundra in bloom. Note the variety of plants in this picture.



5

blends into an area of tall grasses mixed with flowers, such as the purple and white vetches, the arctic heather, fireweed, indian paintbrush, and many others. In this group of plants were found bizarre clear winged leafhoppers, tiny yellow-green plant bugs, even smaller black plant bugs, and vicious assassin bugs that prey upon them and the flies. In the flower heads were tiny parasitic wasps which attack other insects, and buried deep in the flower cups were found the even smaller thrips. Thrips are odd little insects with beautiful feather-like wings and left-handed mouths. The right jaw is missing, and the left one works like a grater scraping the surface of the flower petals so that they

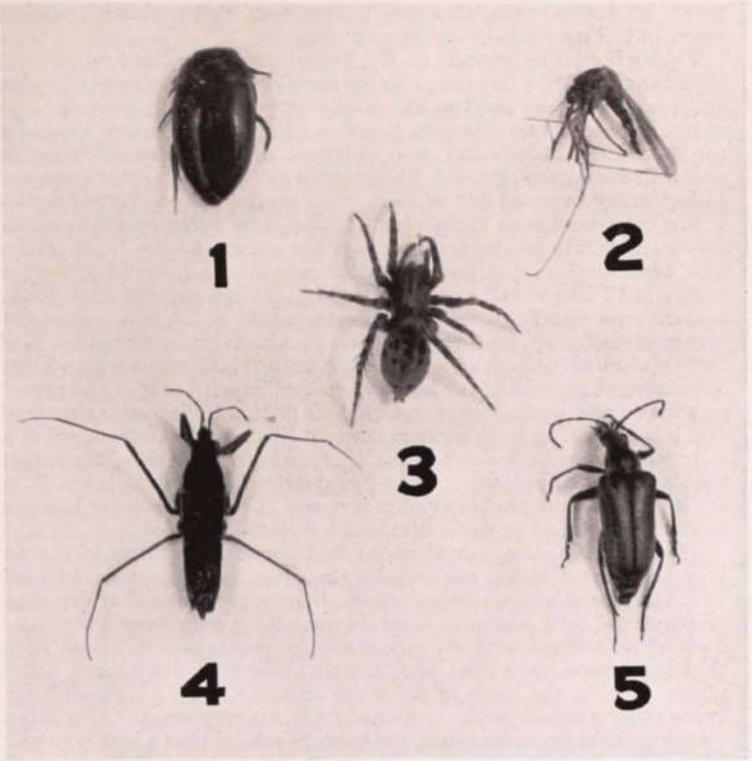


Slightly over natural size. 1. Dragon fly common in the bush near Churchill. 2. Apus, the very large crustacean found in fresh water pools. This specimen shrank slightly while the picture was being taken. The two bumps adjacent to each other near the front of the shell are the eyes. 3. The largest of the stoneflies which breed in the Churchill river. This species was named after Dr. V. E. Shelford, of the University of Illinois, who first brought it back from Churchill several years ago.

bleed and the sap can be sucked up. As you walk inland, this grass and group of sand plants gradually blend into tundra.

As has already been stated, the shore of Hudson Bay is made up of great piles of precambrian granite. These rocks reach, near Churchill, a height of a hundred and ten feet and are piled over each other in a bewildering array of shapes and forms. Nearest the Bay, where they are exposed to the spray and ice action, the rocks are a bare rust colour, but back a hundred yards they are covered with black, reddish brown, or green lichens. No insects were seen feeding upon these lichens, although in some sheltered southern exposures the encrustation of black lichens was an inch thick. Among the rocks, on a mat of sphagnum several inches thick, grows the true high tundra. This is a different type of plant growth from any in the world, except that of high mountain tops. It is made up mainly of lichens, or reindeer mosses, and true mosses. Some of the reindeer mosses are greenish gray, others almost white, and still others almost jet black. They assume a variety of odd shapes, and when examined closely they remind one of the figures on a scratch pad in a telephone booth. Scattered among these lichens are clumps of Labrador tea, a low shrub with rusty leaves and a small berry, and an aromatic evergreen with a beautiful sprig of white flowers. Also there are tiny orchids, strawberry plants with one leaf and one berry, and cranberry plants with ten or twelve leaves and one or two berries.

Peculiarly enough this group of plants has very few insects related with it. There is a small black beetle that looks like a lightning bug without a light, which feeds on the flowers, and the larva of which lives on the soil surface and eats other insects. The mosquitoes are comparatively numerous, but they come from the pools among the rocks and only rest on the plants or seek out the flowers for nectar. Also there is a running spider, different from the one on the sand, which runs over the mat of lichens. These average about one to a square yard and during July each female may be seen dragging a little round ball behind her. This is the egg case. It is made of silk and inside of it are many yellow eggs. The female drags it bumping along behind her, held by a thread, but grabs it in her jaws and fights for it viciously when she is disturbed. As fall approaches a few grasshoppers can be found. Here among the sphagnum and plants, as everywhere in the barrens, are found the most numerous of the insects, the springtails or snow fleas. These are tiny blue, gray, black, or reddish insects which have a mouse trap-like spring on the end of their bodies. They are hardly a sixteenth of an inch long and have two radically different shapes. All are wingless, but under the lense one kind looks like a small gray louse with bulging eyes, while the others look like tiny hunch-backed dwarfs. The spring is a tail-like piece which bends under the body and hooks onto a little catch. When the insect releases the catch it throws itself hundreds of times its own length



Three times natural size. 1. Common water beetle found in all of the fresh water pools. 2. The well known mosquito. 3. Running spider common on the high tundra. 4. Water strider found on most of the pools walking about on the water. 5. A flower beetle. This and another beetle were the two most commonly found feeding on pollen of the many flowers of the tundra.

into the air. They feed on the plants and mould, and in the winter so many will work their way up through the snow to the surface that they will colour it black or reddish. A wide variety of mites, apparently three times as abundant as the springtails, were found in the sphagnum throughout the tundra and bush. These feed on the lichens and on other insects and are just barely visible to the unaided eye.

The Churchill river opens into the Churchill bay at Mosquito Point about six miles from the mouth. The entire bay is affected by the tides of Hudson Bay and, as the country is low and flat, the tidal flats are in some places two miles wide. The river and the bay were not studied, but during the first fifteen days of June a very large stonefly emerged from them. This was the largest insect taken at Churchill excepting the larger dragon flies. Stoneflies are peculiar flat insects whose young live under stones and in the mud of streams, and which may be recognized by the fact that they have two tails and the wings are folded flat over the back. There were several different species of these insects and they ranged in size from small ones only one quarter of an inch long to the large ones nearly three inches long.

The extensive tide flats are covered by a salt grass and several other grasses and plants. With these plants were found insects similar to those found on the grass area of the beach, but on the ground was an entirely different group of insects. Chief among these were a tiny greenish black ground beetle which was predacious on the other insects, and a small bug with a large head and bulging eyes, called a shore bug. These ran around on the ground and sucked the sap of the tender grasses. Early in June only the adults were found, but soon eggs were laid and by the first of July there were thousands of tiny black nymphs scurrying over the ground. The nymphs were full grown by the first of August, and by the fifteenth of August they were probably all adults with shiny black wings. The adults hide in the ground and are frozen there all winter until June.

Bordering the entire tidal area, just above the region where the action of the ice and water is intense, is a dense thicket of the low arctic willows and dwarf birch, in some places hundreds of yards wide. These plants are seldom over waist high and are found throughout the tundra in any low, partly sheltered, semi-wet situation. Willows throughout the continent are shelter for numerous insects and those of the tundra are no exception. They are fed upon by the caterpillars of several moths and the birches are extensively eaten by the caterpillars of wasps called sawflies. These sawfly larvae are very characteristic and easily recognized. They are generally greenish, have large bulbous heads, have a pair of legs on every segment of the body, and lie in a curled position like a watch spring when disturbed. If you pick them up they immediately curl and squirt a light yellow liquid from many pores on the sides of the body. They are readily eaten by the birds and you will see the sparrows and red polls systematically working over the birches hunting for them. When these grubs are full grown, in the latter part of July or the first of August, they leave the birches and crawl into the moss and sphagnum, where they spin a dense, black, almost box-like cocoon. Inside of these cocoons they change to the doll-like pupae and from these the small bright coloured reddish, yellow, black, or blue wasps emerge.

The story is almost the same for the moth caterpillars. They eat the leaves of the willows, but when they are full grown they may or may not go into the sphagnum. The cocoons that they spin are flimsy white things which hardly cover the mahogany brown pupae. Out of these pupae come small variegated coloured moths or millers.

Besides these, there are numerous flies that come to the willows to visit the large catkins when they are in bloom. Inside of the florets of the catkins are thousands of black thrips different from those on the flowers in the sand area. Hanging on the stems and under the leaves where they are sucking the sap of the willows are found tiny, jumping, wedge-shaped bugs called jumping plantlice. These come out very early in the spring and are found on the twigs before the snow is melted or the plants are even in bud. In the south similar insects can be found on trees and shrubs all winter, so these of the north are following the same habits of their cousins. Later on, as the summer progresses, these almost disappear and their place is

The author, well populated by mosquitoes.

Blow flies gathering around the head of a white whale.

taken by leafhoppers, also small, jumping, wedge-shaped, sucking bugs, but of an entirely different group.

Throughout the barrens in the lowest, wettest places which may have standing, but not open, water are almost pure stands of sedges and grasses. These are the haven of numerous flies, especially mosquitoes, midges, and the very large and long-legged crane flies. Here the mosquitoes, black flies, and bulldogs, or horse flies, sit in hordes and wait for a passing meal. They rise in swarms and settle upon you, biting every exposed bit of skin, even to the palms of your hands.

We have now seen something of all of the different kinds of terrestrial habitats of the tundra from the sedges to the high tundra. The great bulk of the barrens in the region of Churchill is covered with what I like to call the mixed tundra. This is rolling, hummocky, and covered with a sponge-like sphagnum into which you sink several inches at each step, and which is water soaked almost eternally. Each little hummock or high spot is covered with reindeer mosses and their associated plants; all of the low spots are filled with sedges and grasses or willows and birches, and the whole is dotted by innumerable pools and lakes, making walking in a straight line almost an impossibility.

In walking over this mixed tundra you encounter all of the insects that are found localized in the pure stands of different plants. They are all present, but in fewer numbers and the mixed tundra is not so heavily populated as the individual habitats.

The aquatic habitats on the land are numerous, but may be divided into permanent lakes, permanent standing pools, permanent pools with streams running through them, temporary pools that dry up in midsummer, and streams. The permanent pools may be further divided into those without any standing vegetation in them, those that have some emergent plants, and those that are almost full of plants. Among the rocks of the coast could be found all the different types of permanent pools, and also the temporary ones. These bits of water were, in my estimation, the most beautiful that I had ever seen. The rocks lie helter-skelter and every depression is full of crystal clear, slightly yellow water. The yellow colour of the water of the tundra is caused by the decaying vegetation. These pools take innumerable graceful shapes, from long slender streaks of water to many sided prisms. No two are alike.

Life in these pools is staggering in its abundance. All of the ordinary methods of estimating the numbers of individuals are useless, and about all that could be done was to estimate by counting the animals in small amounts of water. During July there were apparently from 50,000 to 100,000 animals, large enough to be seen by the naked eye, per cubic foot of water, and the microscopic life would have been many times this.

When I arrived on June 7 the ice of Lake Isabel, three miles from Churchill, was just beginning to melt and had not yet risen from the bottom. Thawing out of this ice were many small stickle-back fish. These were stiff, but flexible like leather, and showed no signs of life as they melted from the ice. Their gills were expanded and their mouths open, but after a few moments there was a little motion in their fins, and several hours later they could dart about swiftly and seemed none the worse for eight months of refrigeration. Also melting out of the ice were thousands of water boatmen and water beetles. Water boatmen are oval to rectangular bugs with long hind legs like oars. They paddle themselves around in the water like a man rowing a boat and breathe by carrying air down with them as bubbles attached to the tip of their abdomens. The water beetles are black or brown and shiny, and also carry air down into the water with them, but they carry it as bubbles under their wing cases. There was apparently only one species of water boatmen, but several species of water beetles. All of them can jump from the water and fly if they want to.

In the permanent pools, as the ice thawed out, came small frogs a dark green with a brown stripe along the side of the body and head. These sang and mated all during June. By the first of July they had ceased croaking and the tiny tadpoles were hatching, and they would be frogs by the time the water begins to freeze again.

Soon after the ice melted there were small water striders running on the surface of the water. These were half as large as those farther

south, but they skated over the water in the same way as the southern forms. They and the water boatmen both laid their eggs during the last of June. The eggs hatched and by the first of July the water was teeming with little black nymphs of the water boatmen and hundreds of young water striders dashed around on the surface. Both of them are predacious and eat any smaller insect or animal that they can catch. By the fourth of August both insects were full grown and there were some new adults out swimming and walking around. It is my opinion that these adults that emerge during August are the ones which freeze in the ice and do not lay their eggs until the following summer.

As the weather got warmer the surface of the pools soon became covered or partly covered with algae and other floating plants. Crawling through these islands of plants were many different kinds and shapes of beetle larvae, little six-legged creatures with long jaws and two tails. These are called water tigers, and they warrant the name, for they are vicious little killing machines that attack any insect or animal that they can overpower. Furthermore there were large red water mites and eel worms, aquatic fishing worms and leeches, and crawling over the top of the algae were white fly maggots. These maggots fed upon the dead insects that fell onto the algae, and when they were full grown, during July, they turned into the oddest kind of puparium. When a fly maggot is full grown it quits feeding and its skin turns hard and brown. This is called the puparium. Inside of this the grub shrinks away from its skin and forms another one. Then it sheds this skin and turns into the doll-like pupa, inside of which is the fly. With the particular kind of maggot of which I was speaking the puparium takes the shape of a dumbbell. One end of it is small and filled with air, while the other end is large and contains the pupa. Thus the thing hangs big end down in the water, buoyed up by the small end which acts as a float, and when the fly is ready to come out it is already at the top of the water and is in no danger of drowning.

So far I have been speaking only of the meat eaters, and probably you are wondering what there is for them to eat if there are so many. Their main diet is midge larvae or blood worms. Midges are small, long legged, thin bodied flies with beautiful feathery antennae, which look like mosquitoes and are accused of biting by almost everyone. The only trouble with the accusation is that about half of the midges have almost no mouths and take no food at all, while the other half have weakly developed jaws and either eat nothing or take a little liquid such as flower nectars. When they come out of the water they generally do so early in the morning or after sundown and fly together in great swarms, so that they appear as columns of smoke. The midges were most abundant toward the end of June and in the first of July. They formed great clouds hovering over the water or swampy places. It is the males that have the most beautiful feathery antennae, and by these they can hear the vibrations of the females' wings which give the familiar squeal similar to that of a mosquito. By means of his antennae then he seeks out a female in the hovering clouds and they mate. All of the hovering and dancing that they do of evenings is but their mating ritual. Following mating the females fly to the water and the males die after a few hours. The females hang onto plants and stick the tips of their abdomens down into the water and in this position they lay their eggs. Some are even so bold as to crawl into the water and attach their eggs farther down. The eggs are laid in long strings like small link sausage and are covered with gelatin. This gelatin absorbs water and swells, twisting the string of eggs as it does so, so that they look like a screen door spring inside of clear or lemon jello. An egg mass will have several hundred eggs in it and be an inch or more in length when fully expanded. These sway in the water and are food for birds, fish, frogs, and numerous insects, but there are so many of them that plenty are left. Each egg hatches into a little worm which eats its way out of the jelly and sinks or swims to the bottom. On the bottom it eats the decaying plants and other organic matter and spins a little silken tube for itself. It attaches bits of dirt to this silk so that it appears like the bottom and lives there all its life, only leaving home once in a while to build a larger one, or simply enlarges the old one. These larvae are so numerous that their tubes completely cover the bottom of the pools and are several layers deep. As they grow larger the larvae turn red, for there develops haemoglobin in their blood. The blood of most insects is yellow or green and has nothing to do with carrying oxygen as does the blood of higher animals, but in these wigglers, often called blood worms, there is this red material in the blood which assists in carrying oxygen to the cells. These insects serve as food for all of the wading birds and the other numerous predatory creatures, yet they are so abundant that their numbers are hardly affected by the carnage.

When the blood worms are full grown they leave their tubes and change into the small gray free swimming pupae. Here a great change takes place, for the truly aquatic worm turns into an air breathing pupa which must swim to the surface to breathe. On its shoulders are two tiny hornshaped tubes called trumpets, and the insect breathes through these. When the midge is fully developed inside of this it splits the skin along its back and crawls out into the air to dry. Many of the other aquatic flies have similar life histories.

Some of the other aquatic flies are the mosquitoes, which are found in the temporary and permanent pools and have but one generation a year, and the Corethra or non-biting mosquitoes, also living in permanent pools. The larvae of these catch food with their antennae. Then there are the crane flies with large gray larvae which have five finger-like gills on their tails and the pupae have long trumpets over an inch in length; and the rat-tailed maggots each with a long breathing tube on the end of the body. Further there are the caddis flies or fish flies, which are not flies but almost aquatic butterflies. Their caterpillars build houses or cases of pebbles, sticks, leaves, or tiny snail shells and live in them, pulling them along as they eat the sedges and algae. The adults look like moths with very long antennae sometimes five times as long as the body. But I am afraid that I could go on and on concerning these aquatic insects.

Before I leave the pools let me mention just three more fascinating creatures. These are the fairy shrimps, the water fleas, and a rare and beautiful creature called Lepidurus. All of these are crustaceans. The fairy shrimps are delicate flesh coloured animals that swim on their backs and wave their legs and gills with graceful rhythm. The males have large jaw-like structures on the head and the females have a long slender egg pouch that extends from the base of the legs backwards, and when full of the round pink eggs is almost as long as the tail. These creatures have a peculiar life history. The eggs are laid and (*Continued on page 61*

Indians, Sandwiches and Bow Fort

To Calgarians Bow River offers the sole opportunity to stir the ghosts of the past. But they must have fifty-cent pieces and sandwiches with which to pay Horatius who keeps the ditch.

By JAMES McCOOK
Regina

IF you go to Bow Fort (and, mind you, I am not recommending anything), expect nothing and avoid disappointment.

Go prepared for Indians. You may leave your Lee-Enfield and Colt at home, but dare not, at any peril, omit fifty-cent pieces and sandwiches.

Take a spade. With this instrument you will discover Bow Fort; without it you may take what cheer you can from non-committal humps among the grass.

The Mounted Police killed Bow Fort and its minor glories deader than a door-nail. When the red-coats ploughed westwards on their trek of 1874, they pushed before them the relics of an earlier, more expansive, life; the story of the Mounties became the story of what was to be southern Saskatchewan and Alberta, and now few bother to search further into the past of these provinces than the Riel Rebellion, the Sitting Bull episode and the disruption of the bloody if glamorous whisky trading. Colonel Macleod's sturdy Ontario boys and English remittance men may have been a boon to the fiction writer, but they are sour grapes to the people who want to know about what there was before the Mounties came.

Before the benign influence of the police was felt from Fort Edmonton down past Morley and on to the international boundary, white people lived with the cheerless but invigorating prospect of being scalped, burned alive or transfixed with an arrow. Even fur traders skipped behind palisades when they saw more than two Indians on the horizon. The traders, the aforementioned whisky trade drummers, priests and Methodist missionaries, with several suicide-minded Englishmen and Americans who tagged along just for the fun of the thing, lived by the grace of the Blackfeet, and they never knew when the Blackfeet would get tired of being gracious.

Rocky Mountain House of the Hudson's Bay Company, for instance, simply had one thing after another. If it wasn't someone viewing the Great Lone Land and worrying about smallpox, it was someone who wanted to paint pictures of mountain flowers and dance with a squaw. Indians chose the backyard to fight their battles in, and the traders knew that if a Blackfeet bullet missed a Cree and hit Sandy McTavish of Kirkwall, Orkney Isles— Well, no one in the tribe would bother writing the Governor to tell him he was sorry but he thought Sandy was a partridge.

Sometimes belligerent gentlemen came over the mountains and said the Kootenays were pretty weary of chasing white men in valleys and would probably take a crack at Mountain House before very long. Others would drift down from Edmonton and point out the post would probably be wiped out by the tribe's southward movement. From the south and east came constant news that the Blackfeet were gathering for one last raid that would leave Mountain House a smoky heap drenched in blood.

In Rocky Mountain House in the long winter evenings there wasn't very much to think about except things like that. Most of the people therein would have preferred the salt mines of Siberia or the Black Hole of Calcutta.

Things came to such a pass finally that even the visiting Indians would not go near the place, and the Company observed with growing horror that peaceable tribesmen were passing up Mountain House and leaving the traders to their thoughts and the Blackfeet.

It was decided that something would have to be done to bring the pale-faces to the attention of their redskinned brethren, not as prospective decorations for a brave's belt but in the matter of guns for beaver and red underwear for mink.

So it was decided to establish a post further south on the Bow river, where (Isn't it gorgeous to get a name of a river that isn't called after a lovesick maiden in a canoe and a once lovesick suitor in his grave?) the Indians got their bows. The emissaries of the Company chose as the site of Bow Fort a point on the river about fifty miles west of the modern city of Calgary.

The advantages of Bow Fort might be stated thus:

1. (Most important.) It was not Rocky Mountain House.

2. (Also important.) There was a rumour there were beaver in the district.

3. (This was optimism.) There might be Indians who wanted to give skins for nice things.

The disadvantages were:

1. (Most important.) There were more Blackfeet than at Rocky Mountain House, and no one had believed that possible.

2. (Most important.) There were also Stoneys, who did not like the Blackfeet. If they were not Stoneys they were some other tribe who did not like the Blackfeet, and no other tribe liked the Blackfeet.

3. (This was fact.) There were no beaver.

Actually, nobody was hopeful about it. In October of 1832, Chief Trader John E. Herriot established Bow Fort and remained there until the spring of 1833.

The following season the fort was used from August 10, 1833, to January 8, 1834, when everyone went back to Rocky Mountain House after a very trying time. As they marched up the cheerfully named Riviere du Mort, on the banks of which the Indians buried their dead, they saw the smoke of the fort buildings rising in the air and knew the Indians who had leered at them from the bluff above were now enjoying themselves.

A photostat of the daily record of Bow Fort which was secured from London by J. E. A. Macleod, K.C., Calgary, the chief authority on the history of Bow Fort, shows that the life of the traders was enlivened by bright little incidents, such as haggard white men dashing up to the gates to tell of massacres, the hoots of blood-thirsty Indians and various other alarums.

But the beaver and the trade languished.

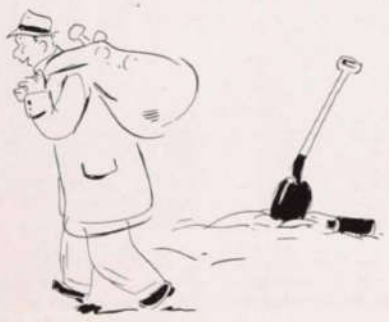
For such amateurish probers into the past as myself, living in a land where there is neither castle, tower nor Casa Loma on which to vent one's spleen, Bow Fort offers the sole opportunity to stir the ghosts of the past without being confronted by the Scarlet Manual or misty policemen with little pill-box hats.

There are disappointments in a visit to Bow Fort. The place is hard to find. If you can persuade the tourists who may be hogging it for Banff at sixty miles an hour that you really want to leave the main highway from Calgary, you should turn south near a little bridge about seventeen miles west of the Morley Indian reserve buildings. Having done so, you will find yourself, supposing you have taken the right turning, either:

1. Stuck in a ditch.

2. Jammed against a tree with your windshield transfixed with a branch.

3. Bogged in a slough.



You will be confronted by an Indian on horseback. People have avoided the ditch, the tree and even the slough, but no one has ever evaded the Indian.

His name is Jonas Ear. He is the son of a long line of hard trading, hard fighting Stoneys. Bow Fort is on his land. Jonas Ear wants fifty cents, and more if you wear plus fours. Jonas would like sandwiches. No fifty cents, no sandwiches equals no Bow Fort. He knows his rights.

Jonas is really a very thorough disappointment. You give him fifty cents and hope the wells of Indian lore will flow freely. Jonas will admit, under questioning, he enjoyed the Calgary Stampede, and the Indian Days at Banff, too, but his father didn't tell him anything about Bow Fort. When he was a little fella it was only a few humps in the grass just like it is now, and nobody gave one hoot about it.

Still hopeful that Jonas would really spill the works if someone gave him a dollar, which you have not got, you try him with an egg sandwich, after picking the better half and the children out of the picnic basket. Jonas takes the sandwich with appreciation, then turns his horse and trots away.

This is your cue to get in your car and chase him over hill and dale, even if an Essex does not take kindly to this Lochinvar stuff.

Jonas leads you to the side of a cliff which has been cut at the point where Bow creek joins the Bow river. You see no signs of Bow Fort but give him a jam sandwich and he goes away.

If you have the true spirit of exploration you will:

A. Argue with your friends that this is not Bow Fort, but where the Boy Scouts camped two years ago.

B. Draw a map of the location of the humps said to represent the points where the fireplaces were in Herriot's day. You will spend maddening hours afterwards trying to think what you meant when you drew them.

C. Get your spade and dig in one of the humps until you come to cinders, which you will roll through your fingers and marvel at what they have seen. You will find some bones which you hope represent the remains of buffalo eaten by the traders, but your better judgment tells you are those of one of Jonas' calves which had spells and died.

D. Drag your protesting family up a steep slope to where five ancient trees stand. One of them has had a slab cut out of its side. This is the tree on which the men who were in Bow Fort in 1833 carved a brief record of their stay. Someone cut it out and took it away years ago, but they left the tree, and for that we are thankful. You will debate whether the holes in the bark of the venerable trees were caused by bullets in some awful duel until your wife, who knows about such things, explains that a beetle made them.

E. Take the bones and cinders home in a bag and leave your spade and thermos bottle behind.

F. You will be content.

THE COMPANY NEWS REEL

J. C. Putt, merchandise manager of the Company's Vancouver Store, says good-bye to his manager, H. A. Stone, and Mrs. Stone as they leave Vancouver airport for a holiday in California.

In January the store managers held their annual conference, this year at Calgary. Above is Mr. G. W. Allan, Chairman of the Canadian Committee, with members of the Committee, the General Manager and store officials who attended the conference.

The Company's Montreal Lake post was visited recently by Hon. John Buchan, second son of Lord Tweedsmuir. Here he is seen with Constable P. Hughes of the R.C.M.P. and C. J. Lockhart-Smith, the post manager.

These big timber wolves were caught by a trapper in the Lac la Ronge area of Saskatchewan. Each pelt was found to be over six feet long when measured by the game branch, Saskatchewan Department of Natural Resources, in Regina, where the pelts were sent to obtain the $5.00 bounty offered for each wolf skin. This bounty was started recently to give impetus to a drive to rid the northern districts of these dangerous animals.

G. A. Beare, manager of the Company's post at Bersimis on the St. Lawrence river, with his eldest son, a future fur trader we hope.

R. S. Harrison, who is well known in the hotel business throughout Canada, has recently joined P. Pastene & Co. as travelling representative in Boston and the New England States for H B C brands of wines and spirits.

The Company's warehouse in Victoria. Built of English brick brought by way of Cape Horn, it was the great Pacific coast depot of ninety years ago. Many will learn with regret that it has become necessary to demolish the warehouse.

It has been said that white men cannot build igloos. Here is proof that they can, as Father Duplain, of Churchill, shows young Paul Coutts, son of a government engineer, how it is done.

Father Ducharme, of the Roman Catholic mission, with an Eskimo at Churchill before leaving for the North.

Above: A skiing friend of the Company sent us this picture of his workmanlike outfit showing a true appreciation of the value of "Good Spirits" for outdoor work. Left: David Hudson Cowley was the first baby born in Saskatoon on 2nd May, 1933, the anniversary of the Company's incorporation, and as a gift received a $25 outfit from the Company. Here he is a fine sturdy boy three and a half years old, of whom his father and the Company are justly proud.

Reindeer Herd

By
RICHARD N. HOURDE
Photographs by the Author

RICHARDS Island, a long dot on the map at the mouth of the Mackenzie river on the Arctic Ocean, was the scene this year of a hilarious event reminiscent of the Calgary stampede; but in place of cattle and horses the stooges were reindeer, though the play was much the same. It consisted mainly of rounding up a herd of thirty-eight hundred reindeer belonging to the Kittigazuit reindeer reserve, that same scuffling, snorting, moving forest of antlers that was pushed and driven across the breadth of Alaska to supply meat for Canadian Eskimos in the Western Arctic region.

As in the fall round-ups in southern Alberta, a corral, one hundred and fifty feet in diameter and four smaller pens were constructed. Amid much good-natured banter and laughter on the part of the Lapland and Eskimo herders, the deer were driven into the corrals to be counted and tagged with individual ear markers. The work was begun August 2 and completed August 6, the official figures showing an increase of nearly a hundred percent in the deer herd after having been for sixteen months wards of the Canadian government.

Three thousand reindeer were bought from the Lomen Reindeer Corporation of Alaska in 1929 to form the nucleus of an enterprise in "meat" planned to extend along the Canadian Arctic coast to Coppermine, and eventually the northwest coast of Hudson Bay. In 1934, when this herd arrived on the eastern shore of the Mackenzie river delta, the ravages of the wolves and the rigours of the long trail had taken toll and reduced the herd to barely more than two thousand. When one takes into consideration the natural increase in the herd during the five years' trek from Alaska, it will be seen the actual loss en route must have been considerably higher than one animal in three.

The remaining deer were driven onto the ice in the early spring of that same year in an attempt to cross

Left hand page and above: Two views of the vast herd with the Laplander and his dogs. Left: Mickle, one of the smiling Laplanders who tend the reindeer, driving off predatory wolves in winter and preventing the animals from stampeding in summer from the tormenting flies.

During a photographic assignment for "The Beaver," Mr. Hourde visited the Canadian government reindeer herd on Richards Island at the mouth of the Mackenzie river. There he saw the vast herd milling to escape from the flying pests of the Arctic, and there he talked to Mickle, one of the Lapp herders who had accompanied the reindeer during their 2,000 mile journey from Alaska.

the final stretch separating them from their destination on the western bank of the delta. It was a ninety-mile trek. A terrific wind arose. The snow that had given the deer footing was swept away and the treacherous glare ice was left exposed, causing the deer to slip and slide and a number to crash violently and break their legs. It was an anxious time, as the herders were well aware. Two hundred thousand dollars worth of "meat" and four years' work was at stake as the deer were led slowly and painfully back to the eastern shore, whence they had come.

No other attempt could be made that year. It was disheartening when they had been so close to their final objective. It was set-backs such as this which had caused delays during the years when they trekked eastward, roughly following the northern coastline of the continent from Western Alaska.

But in February of 1935 the dream of "meat" became a reality when the deer were driven across the delta of the Mackenzie without mishap and officially delivered into the hands of the Dominion government and Andy Bahr, the Laplander who had had charge of the huge herd, sailed south on the Mackenzie river, his job well done.

In July Mr. A. Copland, manager of the Western Arctic district for the Hudson's Bay Company, and Bishop Fleming, Anglican bishop of the Arctic, arrived at Tuktoyaktuk from Aklavik, N.W.T., by schooner and reported seeing the deer massed along the shore of Richards Island. When three days later the bishop put out from Tuktoyaktuk for Shingle Point in a thirty-five-foot Eskimo schooner I embarked with him, having previously arranged to stop for a few hours at the

Top: The Lapp wife of one of the herders. The cradle she carries is hollowed from a block of wood and covered with a tightly drawn deerskin.

Below: A view of the herd which shows the rolling, treeless topography of Richards Island.

island for the purpose of interviewing the herders and photographing the deer herd.

The white tents of the four Lapp and two Eskimo herders contrasted vividly with the musty green of Richards Island, and we detected them easily while we were still far out on the ice-dotted waters of the Arctic sea. The Eskimos are being trained as a part of the government's scheme so that they may in time take over full charge of the herd.

The anchor chain rattled out and a canoe was launched. I was paddled ashore to make an early start in search of the herd, which was continually on the move and likely to be almost anywhere on the island. Later the bishop came ashore and held a service for the deer herders, their children and wives.

In the meantime I was led two miles inland by a stocky fair-haired Laplander, who directed me to a landmark, an additional two miles away, and loaned me his field glasses to aid me in my search from that point. I am certain that without the aid of those glasses I should never have found the herd.

Scanning the rolling country in all directions, I could not see any dark moving mass breaking the monotony of the hills, which were matted with a conglomeration of caribou moss, tundra and many coloured leaves and grasses that blended to a smoky green in the distance.

But even as I swung the glasses in a last slowly moving arc, a Lapland herder was suddenly silhouetted against the skyline of a distant hill. He moved slowly along the crest and descended the near side, to be followed a moment later by a scattered band of deer that stopped for a moment and then trotted out of view.

I walked rapidly for two miles in the direction I had last seen him. I made numerous detours skirting tiny lakes that reflected the azure blue of the Arctic sky in their cold sparkling depths. I was glad, too, of my

waterproof mukluks as I waded through patches of swampy lowlands.

The barking of dogs caused me to look upwards as I ascended the last long ridge. There, seated in the tundra, was a second fair-haired round-faced Laplander with the traditional staff of the shepherd resting across his knees.

He spoke in sharp tones to his dogs. He then rose and offered his hand, and his deeply-lined countenance broke into a smile of welcome.

Mickle, the only name he offered in reply to my query, was dressed in a light reindeer-skin "artiggi," wool cap, and boots with rubber soles and leather tops. A telescope was slung over his shoulder. In the small pack strapped to his back he carried a tea pail and enough food to last him and his dogs throughout their twenty-four hours on duty.

Considering the short while he had been in Canada, the English of the Laplander was excellent. He seemed keen to tell me about the deer. It was apparent that his work was an ingrained part of his life. Though he had been on herd duty twenty-two hours, only taking advantage of lulls in the movements of the animals to gain a few moments rest, he insisted upon walking up the hill with me to point out the deer in the valley below and explain their movements.

What a sight that great herd made as we topped the rise and saw the thirty-eight hundred deer milling about below! The snorting, thudding herd, rushing forward in waves, was like the lapping of the seas coming in on the tide.

Mickle explained that the milling of the deer was due to the flies, the reindeer always moving against the air currents in endeavouring to keep ahead of the tormenting insects. The work of the herder, then, is not to drive the deer, but to keep well in front and prevent the herd travelling too fast. On cold days the deer travel slowly. But when the summer Arctic sun, that travels in a great circle around the horizon without ever disappearing below it, warms the sheltered hollows in the barren lands and gives life and energy to the smaller forms of living things, the deer rush madly, hoping to rid themselves of the pests.

Two men are all that are available to herd the deer at one time. As there are six of them in all (four Lapps and two Eskimos), they divide the work into three shifts of twenty-four hours each. The herders walk out from camp to the herd in the evening with their shepherd dogs, and are almost continually on the move keeping close check on the animals. When relieved the following evening they walk back to the encampment for two days of rest. This goes on every day—rain, snow, sleet or shine.

The two little shepherd dogs that accompany each herder exemplify the patience and understanding that enables the Laplanders successfully to domesticate the reindeer. They are well trained, obey the slightest command of their master, are faithful to the extreme, and invaluable in rounding up the stragglers. Some of the dogs appeared to be crossed with collies and wolves, others with hounds and collies; it was impossible to fathom the origin of others.

During his twenty-four hours on duty the deer herder on the Arctic coast often experiences each of the many varieties of summer Arctic weather. He must dress accordingly; his clothes must shed the rain, protect him from the sun, must be warm in cold weather and reasonably cool in hot weather—surely a problem for the most ingenious.

In twelve hours during an Arctic summer day I have seen all the aforementioned weather conditions appear with amazing rapidity. I have seen the wind shift to the north and, after blowing for awhile off the polar pack, send the thermometer scuttling down to twenty-eight above. Then it would snow; clouds would suddenly darken the sun and for a few minutes the air would be filled with whirling flakes. Again the clouds would part and the sun would shine through. The sky above would be blue. Then another and more formidable cloud would come bearing down from another point of the compass to bombard the earth with raindrops. I have seen ice forming in the morning, only to be melted under seventy degrees of heat by noon. By late afternoon the weather may have changed, and with a chill wind and overcast sky once again ice will be extending long fingers from the fringes of the ponds.

Asked which season of the year he preferred, Mickle thought winter was preferable. In the winter, he maintained, the deer require little or no herding. Working hours are shorter and they have only to patrol the fringes of the herd to protect them from the wolves.

For the "wolf patrols" they use their native Lapland skis, skimming over the hard-packed snows that creak with the bitter frost—travelling along the upper ridges for the most part, ready to swoop down like hawks at the first sign of approaching danger.

One night last April wolves brought down twenty-seven fawns and does. On another occasion they killed seven in one night. Fifty deer in all met their fate at the fangs of predatory wolves, and the herders only managed to shoot one gaunt Arctic wolf in the dusk of Arctic winter.

But when one considers the conditions under which the wolves attack, one wonders that more deer were not destroyed during the long winter nights. The wolves are never known to attack during daylight hours, Mickle said, in recounting his adventures of the past winter. It is only when the sun descends and the Arctic night cloaks their activities that three or four wolves, acting in unison with perfect teamwork, dart in to slaughter the does and fawns.

From their strategic positions on the summits of the highest ridges, whence they can gain momentum in a steep descent, the deer herders can hope only to frighten the wolves away with the speed of their approach and the spang of rifle fire. Accurate shooting is an impossibility in the darkness and the speed of their descent.

The only complaint Mickle had of winter on the Canadian Arctic coast was the severity of the weather. His native Lapland, he claimed, is far warmer, the temperature seldom dropping under thirty below, while recordings on the Kittigazuit reindeer reserve last winter often sank to fifty and sixty degrees below zero, accompanied by high winds that set up a dangerous blinding ground-drift.

But Bishop Fleming was waiting at the coastline to proceed to Shingle Point and I had some four or five miles of rolling tundra to cover on my return journey. I had to get going.

As I waved goodbye to Mickle and began a hurried walk back to the schooner, where the Bishop was waiting, the sun shone brightly and flowers glorified the rolling country. But far out on the blue waters of the Arctic Ocean the ice pack was miraged on the horizon as though quietly waiting for the north winds that would drive it in once more to seal the coast in the grip of winter.

Seven Northern Photographs

Page 31—MACKENZIE RIVER

The Company's Mackenzie river stern wheeler, without her usual barge ahead, makes her way north near Fort Wrigley. In the clear, crisp atmosphere of the subarctic the mountains many miles distant from the river stand up distinct and appear deceptively close.

—R. N. HOURDE.

Page 32—ARCTIC SEASIDE

The short summer of the Arctic is all the softness and beauty that enters Eskimo life. Friendly waves break upon the sands of the Arctic coast line and small boys, happy in the joyous enthusiasm of summer, chase each other in the surf.

—R. N. HOURDE.

Page 33—ARCTIC OCEAN

The ice has broken away from the shore line. For a few short weeks the boat replaces the sled; but as the native stands looking out to sea, he knows that not far below the horizon is the blue ice of the polar pack off which a cold wind blows even at midsummer.

—R. N. HOURDE.

Page 34—ASHORE FOR THE NIGHT

While journeying by schooner along the Arctic coast a party of Company traders and natives are forced ashore by the steady southerly drift of the ice pack. A drift-wood fire warms them during the night and throws sufficient light to catch the ice close inshore.

—R. N. HOURDE.

Page 35—ICE AHEAD

Difficult navigation as the ice bears down upon the shore leaving a passage only a few yards wide. The one with a pole tied to the throttle of the engine, the other with his hand on the wheel, the two men gaze intently at the narrow ice strewn channel.

—R. N. HOURDE.

Page 36—JACK PINES

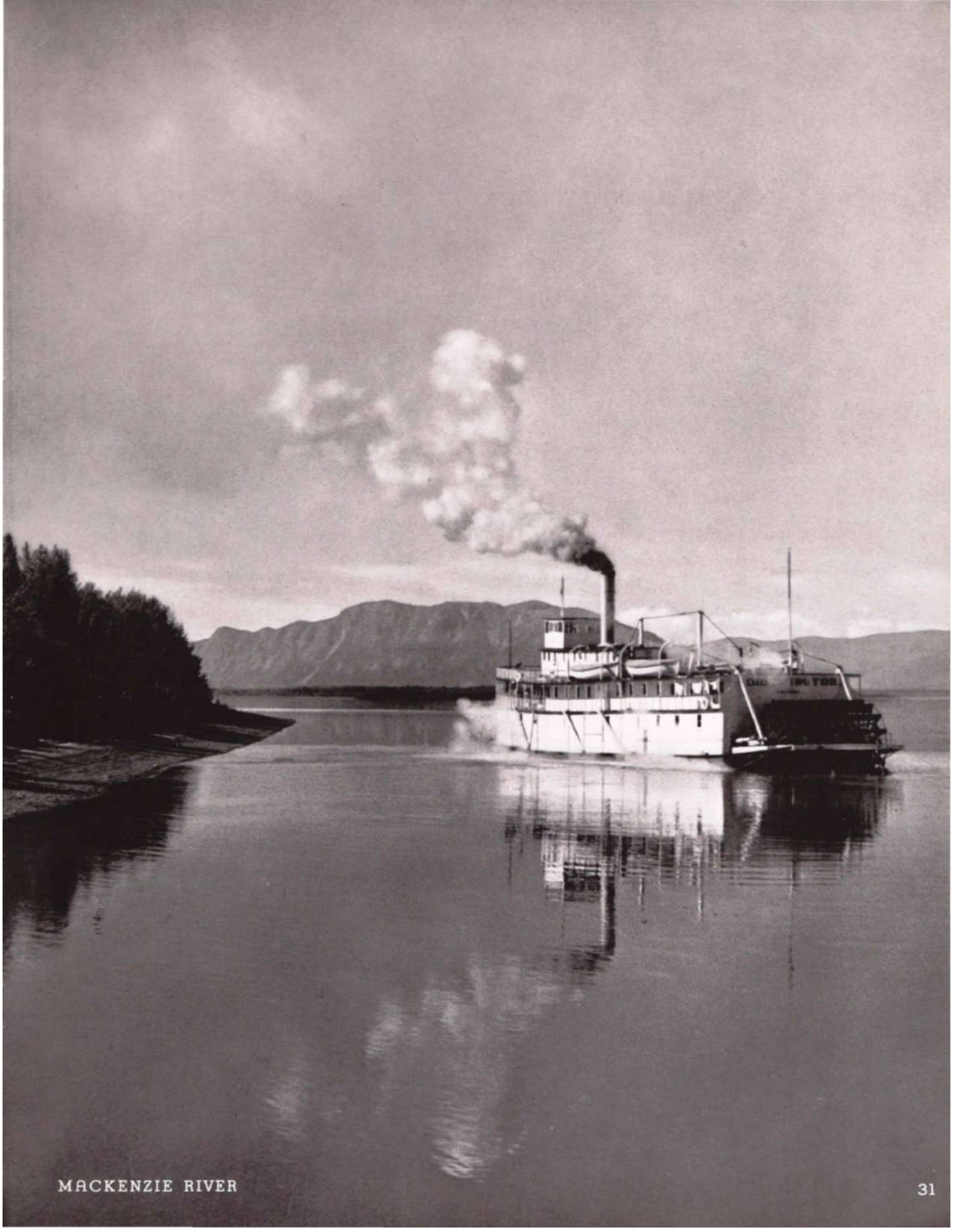
For two days the snow has fallen steadily from a heavy sky. The branches of the jack pines have caught a load of moist snow and on the ground it lies three or four feet deep. The sun at last breaks through throwing into strong relief the shadows of the forest.

—C. G. NICKELS.

Page 37—SPRING SNOW

Summer is only a few days away but a fall of snow comes as a reminder that winter is not far behind. The streams run full and cold, the water breaking over submerged rocks as it courses down to the large rivers carrying the snow water to the Bay.

—C. G. NICKELS.



MACKENZIE RIVER

ARCTIC SEASIDE

ARCTIC OCEAN

ASHORE FOR THE NIGHT

ICE AHEAD

JACK PINES

SPRING SNOW

Langskaill (the long hall) on Gairsay Island, once the home of Sweyn, one of the greatest of the Viking chieftains. The building with the three chimneys is the original long hall and was built in the early twelfth century. The other buildings were added in 1676. Langskaill is one of the oldest inhabited buildings in the Orkney Islands.

Looking into Langskaill from the arched entrance in the courtyard wall. The bell above the inner arch is an old ship's bell.

Orkney and the Hudson's Bay Company

By J. STORER CLOUSTON, Author of "The Lunatic at Large," "Mr. Essington in Love," "The Spy in Black," "Our Member Mr. Muttlebury," "Scots Wha Hae," "The History of Orkney," and numerous other works.

The second of three articles on the Orkney Islands and their inhabitants who played so great a part in the story of the Hudson's Bay Company. These articles were specially written for "The Beaver" by Mr. Clouston, who, besides being internationally famous for his series of popular novels, is also author of a history of the Orkneys. Mr. Clouston writes with authority, for he is an Orkneyman himself and his family has had many contacts with the Hudson's Bay Company.

(In the first instalment Mr. Clouston dealt with the main geographic features of the islands and quoted from old records to give a picture of the physical and mental qualities of the "commonalty of Orkney who built the cabins and dragged the sledges and trapped the beaver in the settlements round Hudson Bay.")

IN the first of these articles I mentioned a party of sixty-three men who left the Orkneys in 1798 for Hudson Bay. It is to be observed that this contingent of sixty-three was made up of thirty-nine men from the Mainland, sixteen from the South Isles—South Ronaldsay alone contributing half of them—and only eight from the North Isles; these last being actually confined to Rousay (seven names) and Egilsay, two islands closely adjoining the Mainland. Now, the Mainland and South Ronaldsay, and also to some degree Walls in the South Isles, and Rousay, were the strongholds of the old odal proprietors down to the early part of the eighteenth century, and in some parishes down to today. These landowners, partly of ancient Norse descent and partly sprung from Scots immigrants bearing good names, held their properties by the old Norwegian odal tenure. By this system, in its heyday, the whole descendants of the original owners possessed the estates in a kind of almost unbreakable entail. All sons had equal shares, and all daughters half shares. Daughters and younger sons frequently sold their portions to the head of the family (this was usually the case in very early days); but, even so, they remained part of an odal-born family with a very high opinion of its dignity.

Even when evil days befell the islands—a story too long to tell here—and the odal properties split up into small farms whose owners shrank into impecunious working farmers, a pretty high standard of self respect and independence was preserved, while the actual blood itself, with whatever virtues it contained, flowed on, not only in the "peerie* laird's" veins, but in those of the tenant farmers, their cousins near and distant. Yet at the same time the prevalent poverty throughout Orkney in the seventeenth and eighteenth centuries, aggravated by an archaic system of runrig farming, limited the people's ideals to a mere carrying on of life as they knew it. And what they knew included little or no education, few comforts, and nothing, save perhaps a sweetheart or a Yuletide revel, that could be called a luxury.

The following passage from the Account, written this time by the Rev. John Malcolm, minister of Firth and Stenness, helps to explain a preference for the rigours of Hudson Bay to a farmer's life in Orkney.

"Ploughing after harvest is very unusual. Small as the farms are, this occasions a throng of work in the spring. Should any man be eight or ten days behind his neighbours, he will have woe enough in the harvest. How soon the oats are cut, they are hurried into the yard. All the cattle are left to their liberty, and he whose corns are unripe must cut them down, or expect to have them destroyed. By the middle of October, hunger and cold force home the half starved cattle from the hills; the hill-dykes are too weak to keep them out; and it is equally impracticable to poind these invaders as to prevent their incursions. They must be hounded with dogs to the mountains, perhaps after a dozen of them have run through fields of standing corn. The hopes of any improvement, or better management, are very remote. The great number of heritors concerned in one piece of land will be found a great bar to improvements whenever they shall be attempted. In one town of land, as it is called, consisting of about sixty acres (Scots acres; 27 p.c. larger than English acres), and with eight farm houses besides cottagers' houses, eleven heritors have an interest."

So that even a farmer, let alone a cottager or a hired hand, had small expectation of bettering his position

*Peerie—little

Stromness from the south, with the old Hudson's Bay cannon in the fore ground. The cannon was fired to announce the coming of the Company's ships.

so long as he remained in that land where unripe "corns" were hurriedly cut to save them from the tramping charge of half starved cattle and little fields were held rig-about by a host of heritors, each jealously guarding his fraction.

Yet poverty and poor conditions did not prevent the Orkneyman descended from an old odal family from priding himself on his pedigree. The Rev. George Low, in a "Description" of Orkney written in 1773, speaks of the calf sometimes having "a better apartment than the heir of a family that can boast of twenty-four generations of uninterrupted lineal succession!" To illustrate the frequent combination of humble station and old landed descent: Out of the sixty-three who joined up in 1798, fully two thirds bore the names of one-time land-owning families, and fourteen of these were even numbered once among the "best landed men" found on the assizes of the sixteenth century head courts. These labourers and sailors cannot now be traced back to any of those old families, and it may very likely have been difficult then, yet they must have sprung from them originally and inherited some infusion of their blood, if not of their acres.

It is hard to imagine better conditions for the production of a race such as the Hudson's Bay Company wanted for their spadework servants—simple, hardy, very shrewd within the limits of their knowledge, highly self respecting, and endowed, I may add, both with a sense of humour and with good humour. It is a curious thing that none of the old commentators mention these last attributes. If one has any sense of humour oneself, the keen and usually gravely expressed Orkney waggishness is one of their most marked characteristics. While, as for their good humour—their readiness to help a friend, or even a stranger—it is

still more difficult to understand how it escaped particular mention. Probably the writers were so used to it that it never struck them as noteworthy.

3

The relations between the Company and their Orkney servants, and the economic effects of the association, are touched upon several times in the Old Statistical Account. Most scientifically exact and addicted to the marshalling of facts of all these old divines was the Rev. William Clouston already mentioned, a learned and dignified figure whose reputation has not even yet been forgotten in the islands. He was perhaps a trifle prosy, according to our snappier modern standards, but a perfect mine of information, garnished with once apt Latin quotations, whereby he indicated to the respectful reader how a gentleman and scholar should set about a statistical essay. It has already been seen how reliable his information was, so that one may with the less hesitation quote the passage dealing with Hudson's Bay Company.

"Hudson's Bay Company's Ships" (he heads the passage). "Hudson's Bay was discovered by Henry Hudson in 1610. France, after disputing the right to it, finally ceded it to Britain, at the Treaty of Utrecht. Since 1670, the trade to that Country has been carried out by a Company, who have an exclusive Charter. The capital of this Company, originally £10,565:12:6d. has been increased to £104,146:17:6d. This Company fits out three ships, from 150 to 400 tons each, which carry out provisions, guns, powder, shot, hatchets, cloths, etc., to be exchanged with the Indians for beaver and other furs. These vessels usually arrive at the Harbour of Stromness about the first of June, where they stop for two or three weeks to take aboard men for their settlements. They engage usually from 60 to 100 men, natives of this county to go to these settlements, every year. They have about 400 or 500 men in these settlements, of whom it is presumed three-fourths are Orknese, as they find them more sober and tractable than the Irish, and they engage for lower wages than either the English or Irish. The yearly wages they give is, house-carpenters, from £20 to £36; blacksmiths, from £20 to £30; sailors from £18 to £25; boat-builders, from £20 to £30; bricklayers or masons, from £20 to £25; tailors, from £10 to £15; labourers from £6 to £18. The Company raises the wages of these men in proportion to the time they remain in their service, because the longer they are, the better they are acquainted with the business, and consequently more useful.

"The Company's ships usually return to the harbour of Stromness about November, to land those men who choose to return home. The returns to the Company by these ships, from all their settlements, is usually from 80,000 to 100,000 beaver skins, or other furs equal in value to this number of beaver; for all other furs are computed by their relative value to the beaver, as are also the goods sent out from Britain; and consequently the Company's accounts with their factors in these settlements are kept in beavers, as ours are in pounds Sterling.

"It has been said by a great writer (Abbé Raynal) that the murmurs of the nation have been excited against this Company, both on account of their monopoly, and also on account of the great profits they make; which might indeed have been great some time ago, when their trade was more extensive, and not checked by the interference of the Canadian traders, and when the expence of supporting their extensive settlements was less; but, of late years, it is asserted, that they do not divide above 6 or 8 per cent, which is no more than the East India Company, and other trading companies in Britain have divided.

"If the murmurs of the nation have been excited because of the monopoly which this Company enjoys, so also, of late years, there have been great complaints in this county, both on account of the small wages given to the labourers, and the great number of them engaged, while the farmers are left without servants. The constant drain of men from this county to the Greenland and Iceland fisheries, the coal-trade, and His Majesty's navy, together with 200 fencibles raised, has tended to foster these complaints, which are principally directed against the Hudson's Bay Company, because they make a yearly demand, and at once, and therefore the more perceptible. We cannot complain that our men are called away to fight our wars; this we can only regret, and that the situation of things makes it necessary, occasioned by the turbulence of a neighbouring nation."

(At this point I apologize to the shades of the learned writer for omitting a sonorous quotation from Virgil.)

The inscribed stone marking the site of a famous well in Stromness.

An old close in Stromness. Those who know old fur trade buildings such as Lower Fort Garry, built by Orkney masons, will notice the close similarity in the construction of doors and windows to those shown in this photograph.

"In time past, when there was not such a demand for men from other quarters, the number necessary for Hudson's Bay might well have been spared from this county; and although it is no doubt better for a country to keep its natives at home, provided they can be usefully employed, either in agriculture or manufactures, yet where there are not manufactures, or improvements in agriculture, thus to employ them, it is better to hire them to those who can usefully employ them; and also better, that they go to hunt the harmless and civilized beaver, than, like the Swiss, to fight the wars of other nations for hire. As to these men being idle and useless to their own country when they return, it may be observed, that several of them are perhaps so before they go there, and that this is what often induces them to go.

"Notwithstanding that those who are against this emigration, represent to those who go, 1st, The dangers to be encountered from mountains of ice in going there; 2dly, The severity of the climate, and the danger of being frost bit; 3dly, The hazard of being cut off by the Indians; yet all this does not deter them from going. But even allowing that all these dangers are exaggerated as perhaps they are, since few are frost bit except through their own inattention, or cut off by the Indians except when it is occasioned by their own imprudence; yet still their solitary situation there, might seem of itself sufficient to weigh against all the pecuniary advantages they can hope to reap in the Company's service; since they are cut off from family and friends, and from all social intercourse but with the natives, where

> . . . 'immersed in furs
> Lie the gross race. Nor sprightly jest, nor song,
> Nor tenderness, they know; nor aught of life,
> Beyond the kindred bears that stalk without.'

Notwithstanding this, too, yet from a restlessness of disposition, a desire of change, and small as the wages are, yet as they are better than the farmers here can afford to give, the Company always procure a sufficient number of men to go to that bleak climate. For their success in procuring these men, they are perhaps indebted to their agent at the village of Stromness, who is a man well qualified for business, and attentive to the interests of the Company. This agent pays away yearly for the Company from £2000 to £3000 Sterling, which no doubt greatly tends to quicken the little trade of this place."

Among other facts to be gleaned from this account, it will be seen that the number of sixty-three men who enlisted in 1798 was evidently below the average and scarcely does justice to Orkney's part in supplying the Company's personnel.

In addition to the information contained in the Account, some further particulars have been very kindly given me by the Company's secretary in London, and I should like to say here that these and all the other facts which follow later, taken from the Company's archives, are published in this article by the permission of the Governor and Committee of the Hudson's Bay Company, to whom I feel a very lively sense of gratitude.

It was in 1693 that we first have record of the Company's ships visiting Scotland in search of suitable servants. In that year a certain Captain Simson sailed northwards with the purpose of enlisting the services of some persons "who would serve the Company at cheape wages." But whether this economical errand took Captain Simson as far north as Orkney is not known for certain.

Nine years later, however—in 1702—it is definitely recorded that Captain Michael Grimmington, commander of the ship *Hudson's Bay*, received instructions to call at the Orkneys *en route* from the Thames to Hudson Bay, "and there to take in 10 or 12 suitable young men for servants." From this it seems as if the Orkneymen were already recognized as suitable for the job, and it would therefore appear likely that Captain Simson found what he wanted in the islands.

These would seem to have been occasional visits, but thereafter, throughout the whole period 1722-1891, the Company's ships called regularly at Stromness. So that one may say that for practically two centuries the close connection between the famous Company in London with its vast territories across the Atlantic and the remote archipelago in the North endured without a break, to their mutual great advantage.

This can safely be said now, but it would not have done to say so to the Rev. Francis Liddell, who wrote the account of the Parish of Orphir in 1797. That divine had none of the cold-blooded regard for mere facts that disfigured such wordly persons as the minister of Stromness and Sandwick. When the spirit moved him to enthuse, he let himself go as a member of an inspired calling should. "The advantages of this parish," he rhapsodizes, "are fire, water and fine women!" And to show that he meant what he said, there is quite a spicy account still extant narrating the consequences of Mr. Liddell's admiration for his housekeeper.

What he disliked, he hated with equal vigour, and the most righteously loathed among his aversions was the Hudson's Bay Company. In case they should ever tend to feel too complacent, let them attend to this denunciation:

"Many young men emigrate from hence yearly; some as sailors on board merchant vessels, who generally land in the King's service at last; although they abhor the idea of being pressed in their own country. Others, and the greatest number, enter into the service of the Hudson's Bay Company; and, instead of offering an honourable service to their King and country, or staying at home to cultivate their lands, and protect their wives, and children, and their parents, for the sum of £6 per annum, hire themselves out for slaves in a savage land, where, in the language of Scripture, they are literally employed as hewers of wood and drawers of water; or, what is a still more distinguishing badge of slavery, in dragging along large loads of timber, yoked in the team, like beasts of burden. My God! Shall man, formed in the image of his Creator, desert the human species; and, for the paltry sum of £6 a year, assume the manners and the habits of the brutes that perish? Fy be on the man, who would rather be the slave of a Company of private merchants, than enter into the fleets and armies of Great Britain, and bravely fight for his King and country, our religion, our liberties, and our laws. Many of those men, at their return, after 8 or 10 years exile, bring home with them all the vices, without any of the virtues of savages; indolence, dissipation, irreligion, and at the same time a broken constitution; and the misfortune is, that having earned a little money, (for, after a five years residence, their wages are augmented), they are enabled to overbid the honest, industrious farmer, who is incumbered with a number of (*Continued on page 62*

On Wings of Arctic Summer

By
ARTHUR C. TWOMEY
Former Professor of Ornithology
University of Illinois

The vast population of migratory birds is one of the most brilliant features of the Arctic summer. From as far away as South Africa and the Argentine some of them come to add their songs to the brilliance of the tundra flowers. Arthur C. Twomey, whose work has recently earned him an appointment in the Carnegie Research Foundation, tells a fascinating story of an unfamiliar wonder of nature.

THE land of the midnight sun has been a land of mystery, of romance, of beauty, of life and death. Much has been written of its silent allure, its fabulous mineral wealth and fine furs. The pages of history read interestingly of the adventures of early explorers, the men who passed beyond the farthest extremities of a civilization into vast expanses of nothingness where the horizons are always distant. Fortune and fame lay far ahead for some, but more often death. This is a land of midnight suns, flowers, short summers, and long dark winters. Although this is the prevalent conception of the Arctic, one of the most fascinating, brightest and comparatively unfamiliar features of an arctic summer is its vast populations of migratory birds. These birds, where do they come from when the snow still blankets the tundras? They are there in multitudes to raise their young, but after their objective is attained they slip away through the first flurries of snow into the distance as mysteriously as they came.

There is no problem more interesting to naturalists than the position which birds hold in the great plan of organic nature. The most important fact to be considered is the power of flight of a bird. Such a power has made the bird one of the most outstanding members of the wide variety of life as it exists on the earth today. There is no other living creature so motile, or that can change its habits to suit so great a variety of life or of environments as does the avian population.

The food relations of birds are so complicated and complex in nature and have such far reaching effects on the other forms of life that it is almost beyond the mind of man fully to appreciate or recognize them. The migration of birds alone has been a mystery for years, and in an adequate study of migration the nesting grounds of the arctic tundra should be considered.

Just as in the days of Samuel Hearne, when Fort Churchill was considered one of the most important forts in North America, the birds of today appear in the arctic wastes at approximately the same time of year, in about the same numbers, and carry on the same activities. In one of Hearne's reports, he makes a list of the birds which he found there. Among them were the familiar names of the snow bunting, arctic partridge, ducks, geese, swans, numerous sandpipers, plovers and curlews. But Hearne did not consider them from a naturalist's viewpoint. He gave a short description of each and a brief account of the most suitable manner by which they could be roasted, stewed or fried for the table. Even now, when so much is being said and done concerning bird conservation, we can excuse him for considering them as a source of food supply; he was living in a strange land where food was continually an all important factor.

I have had the occasion to visit Samuel Hearne's old stamping ground many times in the past, and have had the opportunity of studying birds from an aspect other than that of food. Last spring I decided to be on hand to greet the migratory influx right in the nesting grounds of the tundra.

It was the first of June when I left Illinois. Cardinals and brown thrashers were busy feeding their young. The air was filled with songs of the newly arrived visitors from the south—crested flycatchers, blue-gray gnatcatchers, eastern bluebirds, Carolina wrens, and a

host of others. These were a mere fraction of the early spring migrants that had passed in May on their way north. Geese and swan, with their cries so reminiscent of the wilderness, had passed high overhead during the still hours of darkness early in May. In that vast movement of whistling wings one could hear occasionally the wild cry of the curlew, the twittering of large flocks of sandpipers, the plaintive whistle of the plover or the sharp call of a yellow-legs.

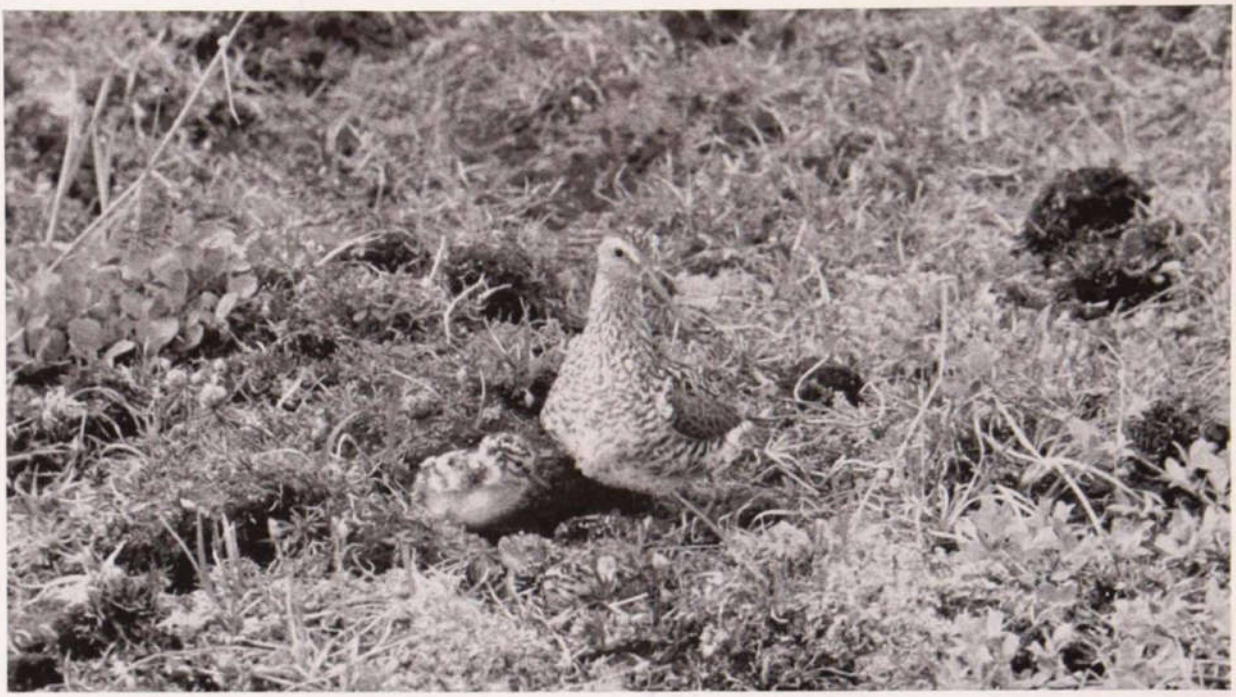
Yet when I stepped off the train at Churchill just five days later, I found winter still in progress. The Churchill river was frozen over; ten-foot snowbanks were scattered about among the rocks. But the air was full of the songs of birds. Lapland longspurs fluttered up against the strong north wind and descended to earth like falling leaves and at the same time gave forth a clear babbling song. Horned larks, singing incessantly, appeared on every hand. A stilt sandpiper went roller-coasting across the heavens, uttering its peculiar and strange *oogly-oogly-oogly* in rapid succession, only to be answered by others from every corner of the tundra. In the distance I could hear the weird

Right: In another three months this baby arctic tern may be found on the distant west coast of Africa, 4000 miles away. Left: The male semi-palmated sandpiper turns domestic and sits on the four eggs which have been laid on a mat of dryas. Below: One pair of enterprising American rough-leg hawks went so far as to build their nest in an old steel Hudson's Bay barrel that had been used for a beacon.

cry of the Hudsonian curlew above all other songs. On the ground the small pools, with their already teeming invertebrate life, afforded the happy hunting ground for large numbers of semi-palmated plovers. In the middle of a small half-thawed pool a flock of northern phalarope were spinning about like tops, kicking up small water animals with their lobate feet and catching them as they spun. On a more distant lake could be seen a larger phalarope, the red phalarope—one of the gayest plumaged arctic birds—its bright brick-red breast glistening in the arctic sun. Such was the picture that greeted me as I came into this wilderness of arctic bird life—a wilderness to those who do not know nature, but a paradise of wild life to the nature lover.

Here, then, were the multitudes that I had heard on that warm May night in Illinois. However, they had not all settled, for both swan and geese were seen vanishing farther into the north. Nor were these alone, for disappearing off the point of Merry rock, ever northward, were red phalaropes, Baird's sandpipers, snow birds, ruddy turnstones and sanderlings.

What was the impulse that kept driving these feathered creatures? Thinking men throughout the ages have asked that question. Surely these birds had not flown to the moon during the winter, as the ancients believed, and were just now returning to



An example of protective colouration is seen in this picture of a stilt sandpiper and its downy young.

earth; nor could they have just risen out of the frozen mud as if by magic. At least they had travelled well over a thousand miles from southern Illinois to the Hudson Bay country, and many of them moved farther northwards.

Migration is not yet understood. Many theories have been advanced, but none can give a definite cause for the movement. As the result of banding birds we have a great mass of data which has thrown considerable light on this phase of their movements. But this great mass movement of birds from zone to zone across the face of the earth renders the study of the relations of bird life to other living forms throughout their range a task that is staggering. The question that at once comes forth is just why or for what purpose does nature intend this vast winged army. Surely there must be some other purpose in the scheme of nature for these feathered creatures than merely to be driven blindly by instinct from the temperate regions of the south, or even as far south as the Antarctic, to the north temperate and arctic regions. It is probably true that they move north and south due to physiological changes within themselves, to climate, to food supply, or for nesting purposes. All these reasons are quite plausible, but surely nature has given them an important task to fulfil; one that requires these minor motives merely to push them forward so that they can suddenly drop down and fit into nature's scheme at a time when reinforcements of this kind will help to preserve the balance of nature.

Such a multitude as that which makes up the bird population of the world most certainly plays its part. They may be likened to an organized police force fully armed and equipped with essential weapons to take over an emergency or merely to fit into the daily routine of life and help keep it in a balanced state.

People the world over today are very much aware of the great mass movements of birds across the face of the earth. The banding of birds has shown us what a perfect organism the aves must be to be able to cover such tremendous distances with so little difficulty and with such accuracy of time, distances and place. Records covering several years can be studied, and one can foretell within a day or two just when the robin, bluebird, crow or any other member of the feathered host will arrive or pass through in the spring migration. Likewise their departure in the fall can be predicted with almost the same accuracy. Migration, then, enables birds to have the world as a home. But, when we consider the ability of these creatures, when once they do stop their migration and raise a family two to five months of each year, to move quickly about over a given locality, we can appreciate their position in nature. It is true that while they are migrating certain species stop to rest and feed; these pauses enable them to carry on a very useful function—the consumption of large quantities of food, much of which if not taken would be of harm to man and nature as a whole. But the pair of birds that come in the spring, mate, choose a nesting site and rear one to three broods of young are really the ones that help control the balance. A great amount of food is necessary for them to withstand their high rate of metabolism, or to feed their young that require an increase of thirty to fifty percent of their body weight per day while growing to maturity. These large demands by the birds themselves amount to at least their own body weight while growing, or from a tenth to a third their weight as adults.

Food has always been of paramount interest in the migratory activities of most birds. An active moving force such as is represented by the mass movements of myriads of birds across the face of the earth each year is a force in nature that is vital to life on this globe. Consequently the first discussions of migratory activity have always been based on the relative food abundance as affecting the shifting bird populations. The most commonly accepted explanation for the seasonal movements of birds has been the food supply. It was said that failure of food in northern areas forced many birds to move out of the region, and, since only a southerly direction could be taken, the birds moved in that direction until the food supply was found to be sufficient to satisfy their requirements. With the approach of spring and the subsequent necessity for the perpetuation of the race, food became the all-consuming requirement. But the southern regions into which the birds had migrated did not afford the necessary food supply for rearing and subsequent survival of the young. Thus those species that had moved in from the north again moved back until they came to a suitable breeding ground.

Although the above explanation of migration has been held for many years and is still considered valid by many, yet, through extensive field studies, it has been observed that birds leave their southerly winter homes at a time when the woods, fields, lakes, streams and byways are teeming with invertebrate life which constitutes the major food of the passeriformes, or perching birds, as well as the major portion of the other smaller orders, including the sandpipers, plovers, curlews, turnstones, phalaropes and a host of other arctic nesters. Then, again, as the migration commences in the fall, the birds leave areas of great food abundance, as the pools, streams and plants afford a vast store of animal and vegetable food. Thus the food theories have not entirely held true. Indeed food is important and probably foremost in a bird's activities. Yet there are other forces at work that are undoubtedly more important as causes for such mass movements. Factors such as seasonal temperatures, humidities and sexual hormonal activities are probably responsible, not as individual factors but as a combination. All of these influences play an important role in the activities of a bird's life.

As I have said before, birds are very adaptive to environmental factors and their adaptability to food has been found to be an important seasonal influence in nature. Such birds as tree sparrows, lapland longspurs and redpolls have been found to be eighty percent vegetarians, feeding upon seeds, berries and various new plant shoots when they first arrive on their breeding grounds at Churchill. In their winter homes to the south they likewise feed for the most part on weed seeds, grass seeds and various small fruits. But as all nature suddenly springs forth on the tundras early in

The short-eared owl, a tundra predator.

The stilt sandpiper nest is a mere depression in the moss.

June, the invertebrate life becomes extremely abundant; the small pools and lakes teem with myriads of small crustaceans and water insects, and the newly grown plants and mosses become alive with vast numbers of insects. The tree sparrows, longspurs and redpolls often change their food to the extend of a hundred percent animal diet. In fact, nearly all of the birds feed themselves and their young on the great numbers of invertebrates. After the middle of August blueberries, cranberries, crowberries, and a berry commonly known as baked apple, as well as a large number of other seeds and fruits, abound on the tundras. The birds at this time prefer vegetable food. Even the gulls that feed mostly on fish, the Hudsonian curlews (which are insect eaters), and the sparrows show dark blue stains of the blueberries on the feathers about the base of their bills. The seasonal food changes of the birds then are important in the great plan of organic nature, but food alone does not explain the migration of birds.

There is one achievement which has at least given to us a slight conception as to the extent to which these wanderers travel during the year. This has been accomplished by tagging birds with metal bands, by means of which their migration routes have been established.

The golden plover that we had heard whistling so plainly half a mile away on the tundra had passed up through the center of North America from the distant pampas of the Argentine. Starting from there in February, it had reached its breeding grounds on the North American tundras in June. In two weeks its four large black-blotched eggs were found on a small reindeer lichen hummock in the wet tundras. By the first week of July the golden young appeared. These young birds soon lost their downy plumage and gradually changed to one of gray. At the end of July, before the juveniles could fully fly, the adults that had begun to loose their ebony breasts in favour of white became restless and suddenly abandoned their young. The young birds, barely able to fly, were left entirely to themselves, for the adults were moving east to the Labrador coast to proceed down the Atlantic side, passing through Nova Scotia. From there these little voyagers would make a two thousand mile uncharted journey across the open ocean to the northern coast of South America. Although thin from the effort of such a long flight, they would continue down through the Amazon valley to the pampas of the Argentine, where they would arrive in December. In the north, with the coming of winter, the young move south. They pass down through the great plains, taking the same route that the adults had taken northward in the spring. Then they fly across the Gulf of Mexico, through Central America, and follow the east side of the Andes in South America, and finally end up with the adults on the Argentine pampas in January. Their reunion with the parent birds in the Argentine is brief; a few short weeks and again they feel the urge to move north to their arctic breeding grounds. And so we realize what great distances the shore birds travel during their migrations. The stilt sandpiper, Hudsonian curlew, yellow-legs, Hudsonian godwit and buff-breasted sandpiper all make a round trip to the Argentine.

The annual migration of birds requires them to traverse hundreds, and even thousands, of miles between nesting seasons. This travel through unfamiliar country in constant danger from the elements and always a possible attack from four-legged and winged predators is a tremendous drain on the avian populations. This makes it necessary that each pair of nesting birds produce the maximum number of offspring in order that a pair of birds will be left for breeding the following spring.

The greatest losses to bird life are probably caused by periodic climatic agencies during their migrations. Those birds that migrate over large bodies of water, whether it be the ocean or large lakes, are in constant peril. In *The Auk*, 1907, W. E. Saunders, of London, Ontario, relates a catastrophe that overtook fall migrants as they passed over Lake Huron. A sudden drop in temperature followed by heavy snows caught great numbers as they flew over the lake. He estimated that thousands were driven into the water and were drowned. Once in the water, the birds were utterly helpless to assist themselves. At one point the dead bodies which had washed up on the shore-line numbered one thousand to the mile, while at another point as many as five thousand to the mile were counted. The great bulk of the birds were sparrows, juncos, thrushes, warblers, blackbirds, vireos, finches, creepers, and kinglets.

Another account of a great catastrophe in 1907 to one species was told by Dr. T. S. Roberts. It was during the northward migration of lapland longspurs and occurred in the midwest when the birds were feeding in great flocks. A driving storm of wet snow bore down upon them; the birds became lost and were beaten to the ground, where they perished in thousands. On only two lakes but a mile in extent it was estimated that 750,000 of these birds were dead.

The destruction of migrating birds at a lighthouse is described by Mr. William Brewster in the "Memoirs of the Nutall Ornithological Club," 1886. He explained that great numbers flying through a dense fog had become attracted to the light and were "unable to throw off the spell of the fatal lantern. Then, as if seized by a panic, they would come against the glass so rapidly, and in such numbers, that the sound of their blows resembled the pattering of hail . . . At times it fairly rained birds, and the platform, wet and shining, was strewn with the dead and dying." Many more stories of similar destruction to migratory birds could be related.

One of the most famous of the long distant migrants is the arctic tern. As I stood watching a large flock of these gull-like birds with their white forked tails, black caps and red bills and feet, it seemed difficult to believe that since they had last nested here they had travelled at least fifteen thousand miles on their migration route. Suddenly, from a little moss-covered island in the lake came shrill cries, and angry birds attempted to frighten me away from their colony by diving at my head. But a new danger arose and their attention turned to a large bird, black except for a white breast, which had appeared over the colony. His wings were long, narrow and pointed; his tail long with the middle feathers streaming off behind. This, the parasitic jaeger, is a constant source of annoyance to the terns. Always on the watch for a luckless tern that has wandered off by itself, he gives chase and attempts to rob it of its precious morsel of food. But the jaeger was soon outnumbered by the terns and left in haste. He was no sooner out of sight than the terns came back to investigate my presence. The more daring swooped down and struck my hat, but after a time they saw that I meant no harm and flew back to their nests. Time was short there, and the young had to be ready soon for a long journey. (*Continued on page 62*

Captain John Palliser and Dr. James Hector in 1860

On the Trail of Palliser

By H. S. PATTERSON, K.C.
Calgary

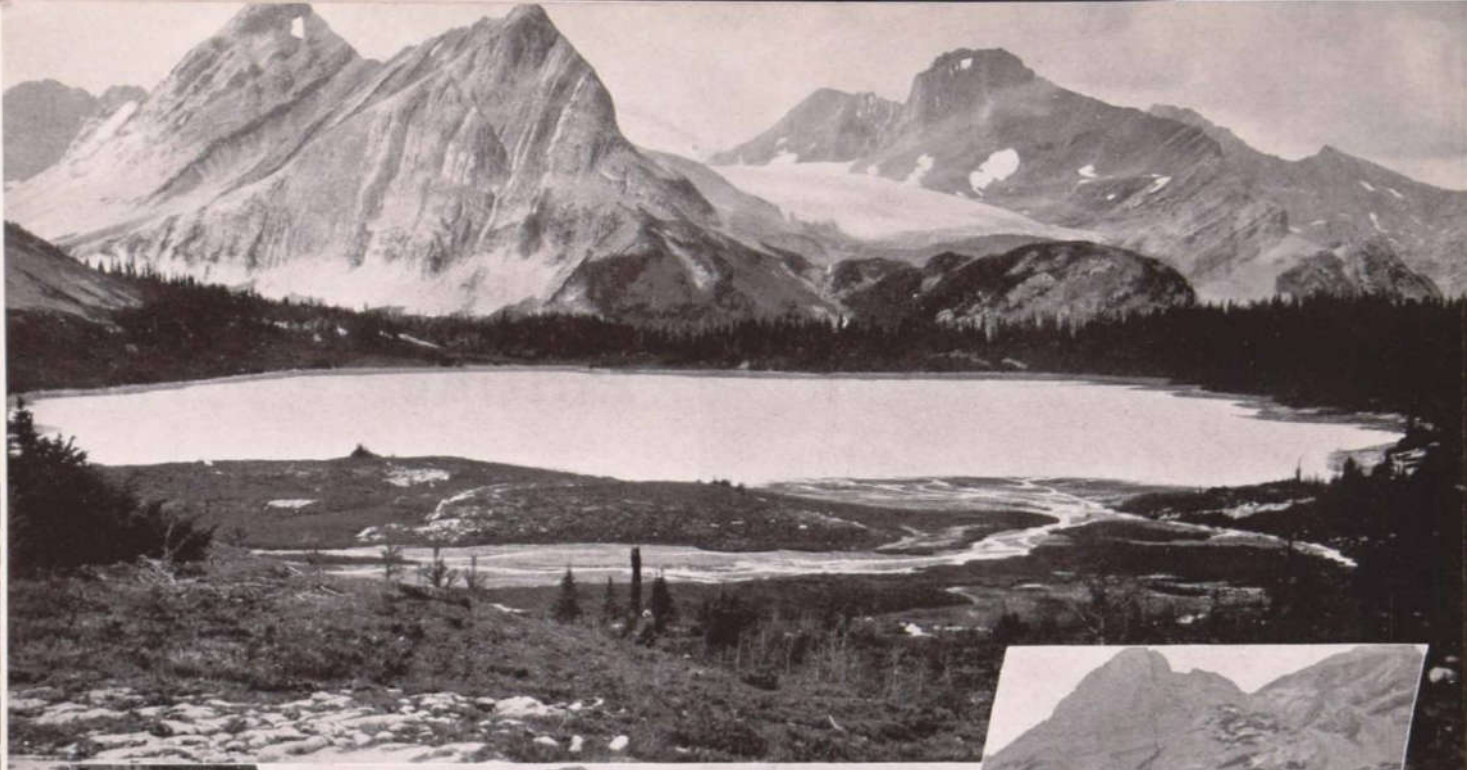
John Palliser in 1857 was given charge of an expedition to explore the Canadian Prairies and Rockies. Several passes into the Rockies were examined to determine whether or not it would be possible to build a railway through the mountains to the coast. Palliser reported that he doubted whether it would ever be possible.

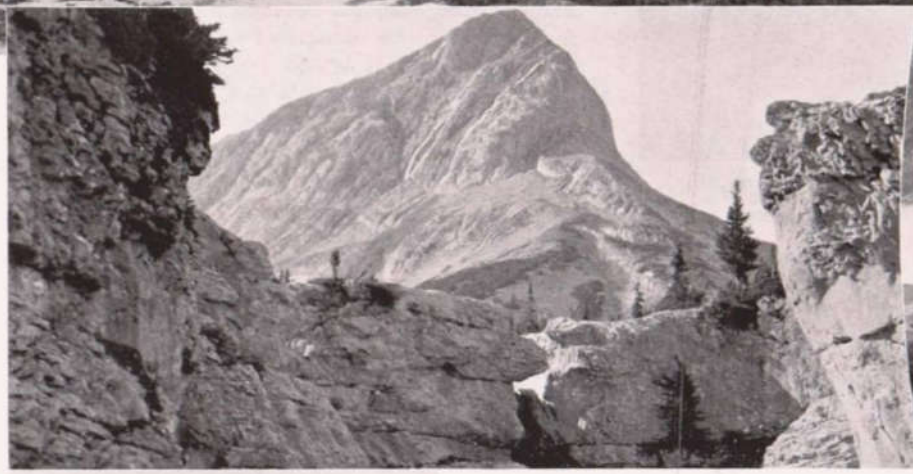
CAPTAIN JOHN PALLISER

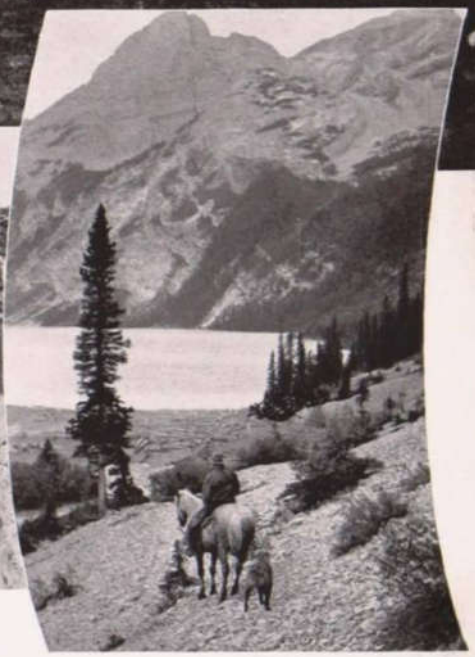
John Palliser, elder brother of Sir William Palliser, famous ordnance inventor, and Wray Palliser, Commander R.N., was born in County Waterford, Ireland, Jan. 29, 1807. He was for some time sheriff of Waterford. In 1847 he left England on a hunting expedition in the American prairies, remaining from October 1847 to July 1848 in the buffalo country. He visited Fort Union, Yellowstone, the Upper Missouri country and the Turtle Mountain district. In 1853 he published an account of his journey in "Solitary Rambles and Adventures of a Hunter in the Prairies." The second edition was published in 1859 under the name "The Solitary Hunter." The book is excellently written and had a wide circulation. In 1857 the Imperial Government placed him in charge of an expedition to explore the Canadian prairies. In 1859 he was awarded the Victoria Gold Medal of the Royal Geographical Society, and on his return from Canada he was elected a fellow of this society. In 1877 he was awarded the companionship of St. Michael and St. George. He died unmarried at Comragh, County Waterford, August 8, 1887.

ON October 14th, 1859, near the site now occupied by the town of Fernie, a white man and two Indians were attempting to milk a wild cow. The Indians were holding the animal by its head and the white man was milking. Suddenly a bell for prayers was rung in a neighbouring camp and the Indians, trained to answer the call, dropped at once to their knees; the cow doubled up the milker, upset the pail and escaped to the woods. Another white man, who had been looking on, was able to see the humorous side of the incident when he wrote it into his diary later, but it is doubtful if he did at the time.

Dr. James Hector and James Beads (the milker) had left Fort Edmonton on June 10th, had travelled southerly past the Hand Hills, reaching the Red Deer river, which they followed to its junction with the South Saskatchewan, then called the Bow river. Crossing this river they had journeyed to the Cypress Hills, which they reached on July 29th. Leaving this point on August 4th and travelling northwesterly, they arrived at Old Bow Fort on August 16th; then followed the route of the present automobile road to Lake Louise, where they turned to the north to follow Pipestone creek to its source. They then crossed the pass of the same name to the







At top: Lawson Lake on the outer North Pass. Centre, left: Turbine Canyon on the North Pass with Mount Maude in the background. Centre, right: Upper Kananaskis Lake. Below: Fossie Falls near Upper Kananaskis Lake.

waters of the North Saskatchewan, which they followed upwards, crossing the continental divide and falling on the Columbia on September 17th. This river they ascended to its source, then followed the Kootenay to the scene of the abortive milking. Their summer's journey was approximately thirteen hundred miles. During much of the time they had been short of food, and after crossing the divide their pemmican spoiled and they had lived on berries, grouse and skunks. They had looked forward eagerly to a drink of fresh milk.

They were members of Captain John Palliser's exploring expedition, which had been criss-crossing the prairie during the two previous years and had crossed the continental divide on at least five passes and was subsequently to reach the Pacific Ocean. The objects of the expedition were in part exploratory but mainly scientific. M. Bourgeau, the genial botanist of the expedition, had classified and catalogued approximately three hundred and fifty plants,

to which Dr. Hector added over forty Alpine species. Numerous calculations of latitude and longitude were made, sometimes daily. Halley's comet appeared in magnificent splendour in the fall of 1858 and a series of careful observations were tabulated at Fort Edmonton showing the position of the comet during the period of its appearance. The quality of the land throughout the plains was classified and soil temperatures at different depths obtained. The famous Palliser triangle (indicating the portions not suitable for cultivation) may be compared with the map recently published by a well known statistical firm. Extensive geological examinations were made and interesting or important formations were sketched. The dictionaries of all Indian languages were obtained or compiled and appear in the reports. The members of the expedition had kept daily observations of the temperature during the whole period, with the hour of observation, the maximum and minimum for the day, barometric pressure, direction and strength of the wind and condition of sky. We find that early in August 1859, near Vulcan, Alberta, there was hoar-frost every night; water froze on August 16th near Jumping Pound and at Banff on August 21st the minimum was nineteen degrees Fahrenheit and at sunrise twenty-three degrees. These temperatures appear to be much more severe than anything experienced in recent years. These diverse activities were carried out notwithstanding that some of the company were on journeys continually both summer and winter. The expedition was carried on with courage, energy and resourcefulness, and marks the beginning (and a very substantial beginning it was) of our scientific knowledge of the Great Plains and the adjacent portion of the Rocky Mountains.

One of the principal objects was stated by Labouchere, then Secretary of State, in his letter to Captain Palliser: "To ascertain whether one or more practicable passes exist over the Rocky Mountains within the British territory and south of that known to exist between Mount Brown and Mount Hooker." The instructions related to the feasibility of constructing a transcontinental railway wholly within British territory.

With these instructions in mind, Palliser was at Old Bow Fort on August 18th, 1858. While hunting on the prairies ten years earlier he had been informed by his friend James Sinclair that a pass existed near the source of the Kananaskis river, and Mr. Sinclair had told him that he intended to try it the next time he made a trip through the mountains. Having established the elevation of Bow Fort as 3963 feet and determined the latitude and longitude, he crossed the Bow river and entered the Kananaskis valley. His diary reads:

"Our course to this point has been south by west and our distance from the entry to the pass about six miles. We now had a magnificent view of the valley of the Kananaskis river hemmed in on either side by an unbroken wall of mountains the sides of which for about 1000 feet were richly clad with pines."

He had reached the gash in the rocks sometimes known as the "Gateway," and more recently as the "Barrier," from which the trail descends to the river, and from which the valley is visible for many miles.

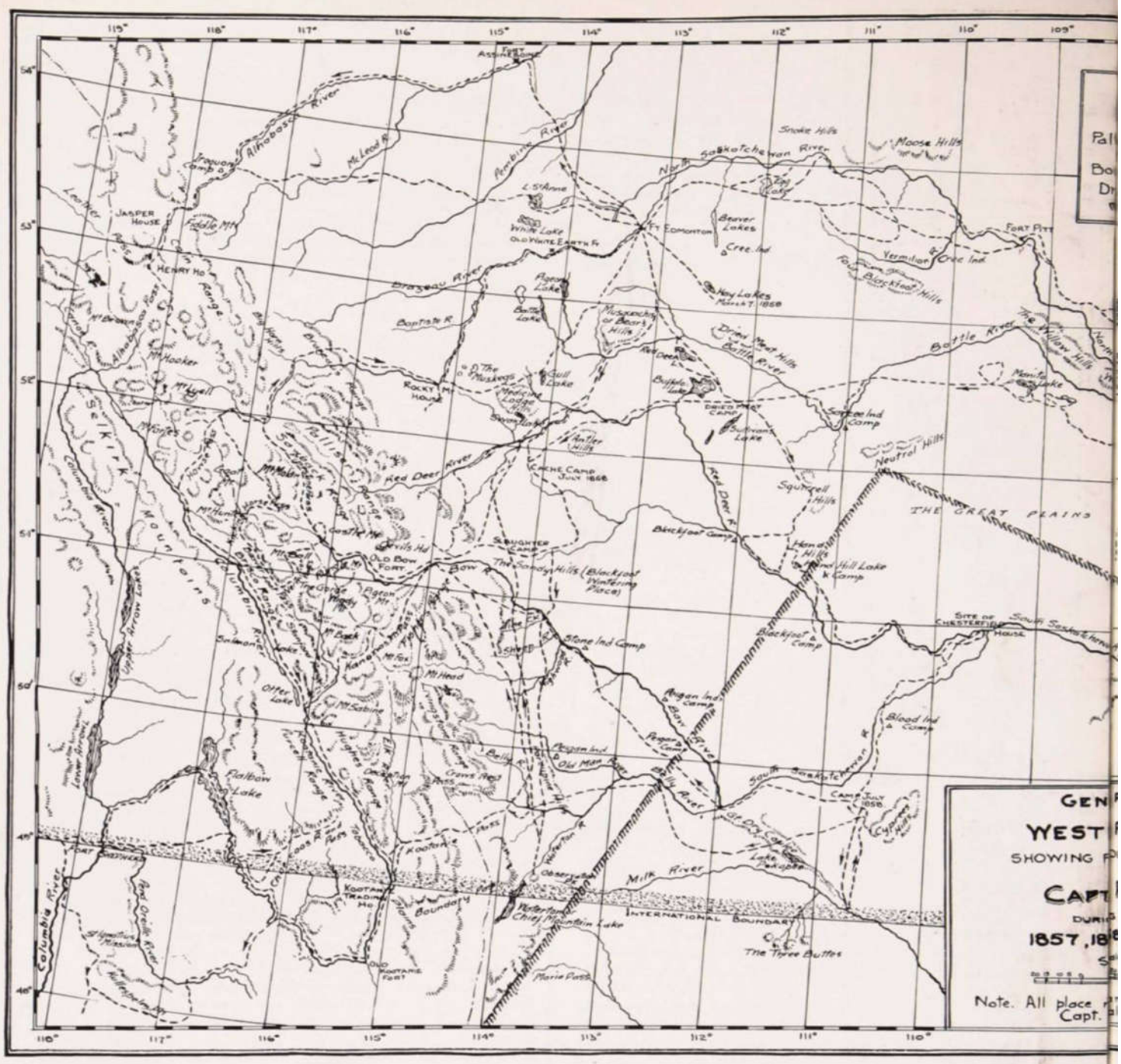
On the 19th he reached Kananaskis Prairie known to the Indians as the place where Kananaskis was hit by an axe and stunned but not killed. This district has more latterly been known as Brule Flats, and is the site of what is now known as Boundary Cabin. A portion of his diary follows:

"The obstacle which a burnt forest presents to the traveller is of all others the most arduous; sometimes we were in a network of trees, lying at all angles the one to the other, and requiring no small amount of skill to choose which should be removed first. It was extraordinary to observe the great care taken by our horses in extricating their feet and legs from dangerous places. The poor brutes seemed to be very expert at this kind of work, and even when caught they would evince the utmost patience, and free themselves as gently as possible. We have passed many bears' lairs on our march to-day, and within 20 feet of our camp fire a grizzly bear had taken up his lodgings only a short time previous to our arrival. Some of these grizzly bears are of an enormous size; they are fond of the turpentine of the pines, and are capable, when standing on their hind legs, of reaching up the stems of the trees, and stripping off their bark to the height of nine or ten feet, in order to obtain the turpentine that oozes out; but although black bears are great climbers, the grizzly bears are never known to ascend trees."

His explanation of the marking of trees by grizzlies is interesting, but not in accordance with present theories.

"Aug. 20th, Friday—A patch of prairie land, which offered good feeding for our horses, and, as such places are rare, we encamped for dinner. About four miles south of this place, there is another similar patch of sward, and at its western extremity the wild and beautiful Kananaskis river leaps over a ledge of rock in its valley from the height of 20 feet, and rushes on its way through a dense forest of pines. Piles of drift timber, carried down by the spring floods, lay here and there in sheltered bays along this part of the river, including pine trees, with their roots encumbered by masses of rock and gravel, swept down by the spring floods. . . . Two very conspicuous mountains at a distance of about 12 miles to the south of us flank the height of land across which we shall have to pass to gain the western side of the watershed."

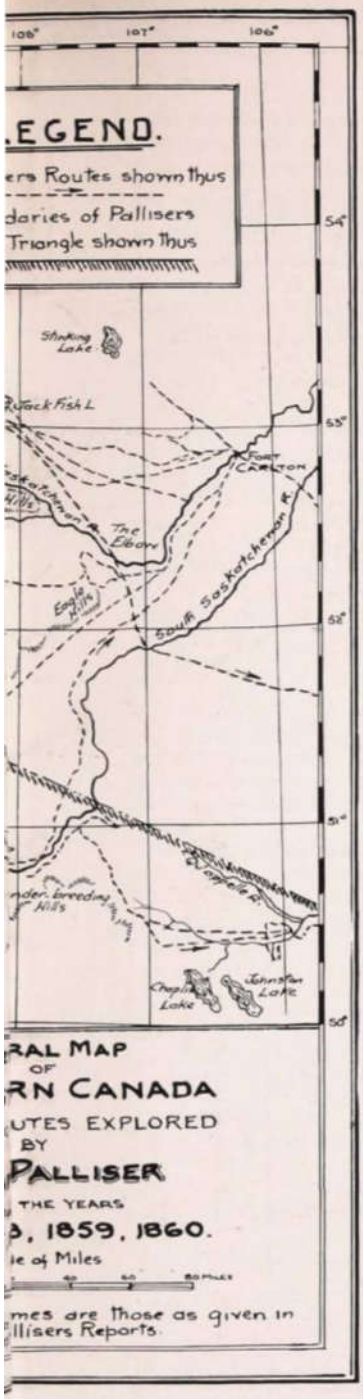
"Aug. 21st, Saturday—By noon we had arrived at the base of the two high mountains alluded to above, an observation for latitude gave 50° 57′ north. We remained here for about two hours, to take our observations. We were in a level meadow, hemmed on all sides by a dense forest of pines, which stretched far away up the mountain sides. Higher up the valley is the glacier, which forms the source of the Kananaskis River. This glacier sends off the mountain sides hundreds of small streams, which under the sun's rays, had the appearance of silver threads. The mountain goats higher up, which looked like small white spots in slow motion, seemed to eye us as intruders. At our feet the river, which above this place spreads out into two lakes, flows through a contracted channel with great rapidity. From it we obtained some splendid trout; we got two kinds; the flesh of one was of a bright salmon colour, and of a fine flavour, far superior to the other, which was white. Crossing one of the lakes which forms part of Kananaskis River, and continuing our course to the point where we intended to make our ascent, we came on a magnificent lake, hemmed in by mountains, and studded by numerous islets, very thickly wooded. . . . While going round the edge of this sheet of water, where the fallen timber greatly embarrassed us, one of our horses, strangely enough, adopted the other alternative of swimming



Extract from Palliser's report with reference to the arid triangle, shown on the above map: "This central desert extends, however, but a short way into the British territory, forming a triangle, having for its base the 49th parallel from longitude 100° to 114° W., with its apex reaching to the 52nd parallel of latitude."

across the lake. This effort of intelligence caused us serious misfortune and dismay, as his pack contained our only luxuries, our tea, our sugar and our bedding. In some places large blocks of limestone, which composes the mountains in this part, were lying all broken and heaped in a singularly artificial manner. A few grouse have been killed but we shot very few of any other kind of birds, excepting owls. We camped close to the Kananaskis River, at the base of the most northerly of the two high mountains noticed above."

His course to this point, even without the assistance of the map, can be followed with certainty. He had arrived at the Lower Lake on the east side of the river, followed the lake to its source and crossed at the present ford, camping above the Upper Lake. His description of the broken limestone is singularly apt. What happened on the following days is not so clear and has been the subject of controversy.



"Aug. 22nd, Sunday—We started from our encampment at half-past seven, and travelled till 10 a.m., when we reached the edge of the pine woods at the base of the height of land, took an observation for longitude, 115° 27′ 40″. Started again at half-past twelve on our ascent, which we found much easier than we had anticipated. At two we had nearly reached the height of land. We then stopped at a spring to rest the horses, after which we completed our ascent in a few minutes, having gained the height. Our course was circuitous, owing to the rocky nature of the summit level, which was not altogether devoid of timber. . . . Towards dark the summits of the mountains became wrapped in misty clouds; this, combined with our proximity to the glaciers on either side, and the scarcity of wood for our camp fire, caused us to pass a chill and uncomfortable night."

"Aug. 23rd, Monday—Started after breakfast, rode along the southern border of our little teakettle lake, and commenced our descent of the western slope of the Rocky Mountains. Following the stream that issued from the lake we observed it grow larger and larger as it received innumerable little tributaries, until it at last became a broad and rapid, although shallow stream, and assumed the dimensions of a considerable river. The first 300 feet of our descent was very steep for the horses, as well as rocky and covered with loose shingle, but as we descended the valley the slope became less formidable; at the base of this slope in the valley of this river (which the men ever afterwards called Palliser's River, to distinguish it from the other branch of the Kootanie River) we took readings. . . . A remarkable change was observable here in the increased luxuriance of vegetation; also in the appearance of shrubs we had not seen on the east side of the mountains. Amongst others, a species of raspberry with a remarkably wide leaf grew abundantly."

His measurements were as follows:

	Feet
Considering the Bow Fort at an elevation of	4,100
Above the level of the sea, the rise of Kananaskis river to the eastern base of the height of land, was estimated at	950
Immediate rise to the height of land	750
Total ascent of the height of land	5,800
The first steep descent to the west	350
Further descent to the west base of height of land	850
Further descent to junction of Palliser and Kootanie rivers	950
	2,150
Subtracting these, we get the altitude of the Kootanie above the sea, which agrees with observations of Doctor Hector taken independently higher up the river	3,650

There are two passes at the termination of the lateral divide: the South Kananaskis Pass, elevation 7439 feet; and the north pass, elevation 7682 feet. Mr. J. N. Wallace, a very acute student of early western history, in his little pamphlet entitled "The Passes of the Rocky Mountains," maintains that the observation of latitude taken before reaching the pass proves that Palliser went by the southerly route. On the other hand, the Interprovincial Survey Commission assume that he went by the north one, influenced no doubt by the very strong northerly trend of the route as shown on the map and the fact that his description seems more applicable to the north pass.

The writer has been on both passes, the north one several times. The diary fits the latter in a general way, but it is wholly impossible to make it fit the south pass in any way whatever. There is a summit level—nearly four miles of it—on the north pass and a small stream, which might be Palliser's spring, near the summit. The ascent to the south pass is without running water in August. The pass itself is a cup-shaped hollow between two ridges with a spout at the western end and there is not half an acre of level land anywhere on it. Palliser's statement—"our course was circuitous, owing to the rocky nature of the summit level"—is a perfect description of much of the route over the northerly pass. The writer does not recall any detached rock on the south pass. Elsewhere in his reports Palliser says he was able to ride his horse to the summit of the pass. This would not be possible if he had gone by the southerly route. So it seems that he went by the north pass.

Palliser's observations of the elevation of the pass have been a matter of despair to students of his diary. The elevation of Bow Fort is given in one place as 3,963 feet and in his summary as 4100 feet. The error, in either event, is trifling but perhaps indicates carelessness in observation and records. He gives the total elevation to the base of the height of land as 950 feet, which would be less than one fifth of a mile over a distance of over forty miles following a mountain stream. The correct figure is 1800 feet. He gives the rise to the height of land as 750 feet, while the correct figure is 1782 feet, the total error being 1882 feet; or if the south pass is considered the route, 1639 feet. The height of the pass, given in his observations as 5800 feet, appears elsewhere in the map and reports as 5985 feet in one place and 5700 feet in others. His diary of the 23rd and 24th presents further difficulties, his directions and distances not corresponding with the course of the river as now known.

Lieut. Blakiston, who was attached to the expedition, quarrelled with him and virtually severed his connection with the expedition. Speaking of Palliser's discovery of the pass he says: "The next pass which enters the mountains in common with the fifth on Bow River has been named the 'Kananaski Pass' (see Parliamentary Papers, June 1859), and was laid down by latitude and longitude observations during the summer of 1858 by Captain Palliser. This also leads to the Kootenay River, passing near the Columbia Lakes. It is generally supposed that this pass was only discovered last year, but a description of it is to be found in "An Overland Journey round the World," by Sir George Simpson, who, together with a party of emigrants about 50 in number, under the late Mr. James Sinclair, passed through, but not with carts as has been stated (see Evidence before the Select Committee, Hudson's Bay Question), to the lower part of the Columbia in 1841, besides which it has been used by other travellers."

Palliser's cordial relations with Dr. Hector, M. Bourgeau and the other members of the expedition strongly suggest that the quarrel was Blakiston's fault, and this is borne out by Palliser's restraint in making criticism of Blakiston, whose reasons for leaving the expedition were, to say the least, obscure. And Blakiston was hopelessly wrong about the history of the passes. Simpson's route is well known. Sinclair's statement in 1848 that he intended to try the Kananaskis Pass the next time he went through the mountains indicates clearly that when he travelled with the emigrants in 1841 he had gone elsewhere, and in any event it is believed that the emigration went by Whiteman's Pass. Palliser was a resourceful and self reliant explorer, a diarist of ability and writer of unusual skill, but perhaps not an accurate observer. In this respect he differs from Dr. Hector, who makes frequent reference to landmarks which can still be identified with certainty so that the exact course of his journey can be mapped accurately even today.

While no doubt considering his discovery of the pass one of the great achievements of the expedition, Palliser did not suggest that there were no other passes to be discovered, or that his was the best, and frankly relates the merits of Howse Pass and Vermilion Pass, over which Dr. Hector travelled. Rather curiously, while the Kicking Horse Pass was discovered by Dr. Hector during the course of the expedition, it is not referred to as having any merits either for a railway or a wagon road. But while preferring the Kananaskis route he states that he wishes it understood that better routes might be available to the north. And in this he was perhaps more accurate than he thought. For within four miles of the north pass is the pass now bearing his name, over eight hundred feet lower, and within a further distance of three miles is Spray Pass, whose elevation is fourteen hundred feet below that of the north pass. And both of these passes have a much more gentle approach from the east and are much less abrupt on the west than the one Palliser discovered.

But he was very pessimistic as to the feasibility of building a railway across the continent wholly in British territory. The easy route through the United States by way of St. Paul militated against it and it would be a most formidable and expensive undertaking.

"Still the knowledge of the country on the whole would never lead me to advocate a line of communication from Canada across the continent to the Pacific, exclusively through British territory. The time has now for ever gone by for (*Continued on page 66*

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LONDON OFFICE NEWS

On 26th November 1936 Her Royal Highness the Duchess of Kent honoured the Company by coming to Beaver House to inspect some of our furs. She was accompanied by her sister, Her Royal Highness Princess Paul of Yugo-Slavia, and together they toured the warehouse, showing keen interest in the various furs. The visit was an informal one and no ceremony marked the occasion.

Early in November Mr. G. W. Allan, the Chairman of the Canadian Committee, and Mr. P. A. Chester, the General Manager of the Company in Canada, were in London again to confer with the Board.

On 20th November 1936 Mr. Graham Towers, the Governor of the Bank of Canada, was the guest of honour at a luncheon given by the Governor at Hudson's Bay House. The following were also present: the Deputy Governor, Sir Edward Peacock, Mr. G. W. Allan, Colonel J. B. P. Karslake, Mr. Ian P. R. Napier, Mr. E. J. Bunbury, Mr. C. L. Burton, Mr. J. H. Gundy and Mr. P. A. Chester.

The British Records Association held an exhibition of business archives at Merchant Taylors' Hall in connection with their annual conference in November. To this we loaned one of the earliest minute books of the Committee and a journal.

The Beaver Club held a most successful Christmas party at St. Ermin's Hotel on 22nd December 1936, a variety entertainment being followed by dancing and all manner of games. The Governor and Mrs. Ashley Cooper, the Deputy Governor and Miss Murray, Colonel and Mrs. Karslake and Captain Cazalet all attended this most enjoyable function. During the evening a cable was despatched to all the Beaver Clubs in Canada; a telegram was also sent to Mr. J. Chadwick Brooks, vice-president of the club, who was absent through illness.

The Governor entertained Sir Wilfrid Woods, the newly appointed commissioner for Newfoundland, to luncheon on 15th January. Other guests were: Mr. D. J. Davies, trade commissioner for Newfoundland; Mr. J. C. Patteson, European general manager of the Canadian Pacific Railway Company; and the following directors: Sir Alexander Murray, Sir Edward Peacock, Colonel J. B. P. Karslake, Mr. Ian P. R. Napier and Mr. E. J. Bunbury.

On 18th January Sir Herbert Stanley, governor of Southern Rhodesia, came to Hudson's Bay House to see our pictures and archives, and to lunch with the Governor and Directors; Sir Henry Birchenough, Mr. F. R. Phillips, Mr. Edward de Stein, Sir Edward Peacock, Colonel J. B. P. Karslake, Mr. Ian P. R. Napier and Mr. E. J. Bunbury were also present.

On 26th January the Governor presented long service medals to members of the London staff. Mr. J. W. Metcalf received the gold medal; Miss D. L. Hollis, Miss L. A. Leonard, Mr. H. Smith, Mr. R. Chick and Mr. W. J. Casemore, silver bars; and Mr. J. H. Garland, Mr. A. Faux and Mr. E. W. Beaney, the silver medal.

In addition to the guests at the luncheons mentioned above, the archives were visited by Mr. and Mrs. Richard Finnie, Mr. John N. Leonard and Mr. Arthur Brock of the Wines and Spirits Department, Winnipeg. Mr. D. G. G. Kerr, who is engaged on historical investigation concerning a former Governor of the Company, has paid several visits.

THE FUR TRADE

Fur Trade Commissioner's Office

During December the Fur Trade Commissioner visited most of the western centres, including Regina, Saskatoon, Prince Albert, Edmonton, Calgary, Port Simpson, Vancouver and Seattle. Later he visited Hudson after the fire at that point, and on January 20 he sailed from New York on the *Berengaria* for England, having called at Montreal on the way east. He expects to return on the *Queen Mary*, leaving England February 17.

There was a very large attendance of buyers at the Company's London sale, which opened February 1. Practically the whole of the offering was sold, and the prices of most lines showed considerable improvement over those of the past few years.

M. R. Lubbock and J. C. Donald visited Prince Edward Island and other fur centres during the early part of December, and later in the month Mr. Lubbock accompanied H. P. Warne on a visit to the western Fur Purchasing Agencies, while Mr. Donald visited Calgary in connection with consignments from that point.

E. W. Fletcher visited Edmonton during the latter part of January.

R. H. Chesshire accompanied the Fur Trade Commissioner on his trip to western points in December.

H. E. Cooper has visited a number of the line posts in Superior-Huron and Mackenzie-Athabasca districts during the past quarter.

R. H. G. Bonnycastle arrived in Winnipeg from the Western Arctic district December 9, after having been greatly delayed en route owing to the "in-between" flying seasons. He is now attached to the Fur Trade Commissioner's office staff, having handed over the Western Arctic district to A. Copland last summer.

H. P. Warne visited the western agencies as far west as Edmonton during January.

Among out-of-town visitors at the office during the past three months we have noted the following: Colonel J. K. Cornwall; Bishops Lajeunesse and Breynat; H. A. Stone, manager of the Vancouver store; and Miss Hatch, fur buyer, also of Vancouver store; Miss C. I. Forrest, of Hartney, Manitoba, who was a passenger on the *Nascopie* last summer; and Max Hamilton from Mingan.

J. Runcie, post manager at Island Lake, was transferred to Winnipeg recently to take up duties in connection with the staff training arrangements now under way.

The model store and training school in Hudson's Bay House have now been completed, and it is expected that courses will begin within the next week or two when twenty-six recently engaged apprentices are brought in for preliminary training.

Their many friends throughout Northern Canada will be pleased to hear of the appointments of Major D. L. McKeand and Mr. Austen L. Cumming as superintendents of the Eastern Arctic and the Mackenzie River, respectively, under the new federal Department of Mines and Resources. Major McKeand also retains his previous position as secretary of the Northwest Territories council.

British Columbia District

We regret to report that Wesley L. Burk, an ex-employee of the Company in this district, lost his life by going through the ice at Ocean Falls, B.C., early in January 1937. Mr. Burk entered the service in 1933 and resigned in October 1936 to join the Ocean Falls Pulp and Paper Mills. At the time of his resignation he was stationed at Port Simpson post. Mr. Burk was very well liked by all with whom he came in contact, and we offer our sincere sympathy to his bereaved family.

The first trip of the newly inaugurated air mail service from Fort St. John to Fort Grahame, B.C., was made by United Air Transport on 13th January, and was successfully completed.

The Fur Trade Commissioner visited us for a few days in November, after which he left on 25th November, accompanied by Mr. Chesshire and Mr. Milne, and visited Hazelton, Kitwanga and Port Simpson posts. Mr. Milne returned to Edmonton on 7th December.

Other visitors to the district office this winter have been H. P. Warne, H. E. Cooper, E. W. Fletcher, D. M. McCurdy, J. C. Donald; Const. J. S. Clark of B.C. Provincial Police, Fort Nelson; Miss Frances A. Hatch, manager of the Fur Department, Vancouver retail store; and A. T. Penhorwood, of Waterways, Alta.

Early in November there was a washout on the railway track between Hazelton and Prince Rupert, which disrupted the regular train service for a week or two. The Skeena river was up to flood level on 19th November.

A new government wharf was completed in October on Tacla lake at the end of the Manson Creek trail.

We are informed that Manson Creek, B.C., is fast becoming a live mining centre, with more people around than there have been since 1875.

Miss Cox, of Hazelton post, was sick in hospital for a few days during December, but we are glad to say she was able to return to work shortly after.

Miss J. Millar, of district office staff, took her annual holidays this winter, spending Christmas and the New Year at her home in Vancouver.

Freight for Frances Lake camp trade was successfully flown in from Carcross by Northern Airways during December.

Unusual weather conditions prevailed in the Cassiar sector last fall. At Telegraph Creek post, instead of the usual snow in December, they had heavy showers of rain, and freeze-up did not occur until the end of December.

Our store at Kitwanga was visited by Santa Claus the day before Christmas,

which greatly pleased all nearby residents, especially the children, who each received a Christmas stocking.

We welcome Arthur Brentzen to our staff at Port Simpson post and wish him every success in his appointment.

Our freighting contract from Prince George to McLeod's Lake, Fort Grahame and Whitewater for season 1937 has been awarded to Mr. R. F. Corless Jr.

The district manager left Edmonton on 11th January on an extended inspection trip of line posts, and at time of writing has visited Fort St. James and Manson Creek outposts. Owing to adverse flying weather, he was held up at Manson Creek for over a week.

Western Arctic District

The district manager, A. Copland, flew from Aklavik to Coppermine via Great Bear Lake just before Christmas for his inspection of the eastern posts. Since then he has travelled with dogs from Coppermine to Bathurst Inlet and thence up to Wilmot Island and Cambridge Bay. He will also inspect Reid Island before returning to Winnipeg in March to make preparations for the coming season and attend the fur trade conference.

We regret to report that the schooner *Aklavik* was unable to reach Perry River last fall. Captain E. J. Gall attempted the trip as instructed at a very late date, and after reaching Wilmot Island from Coppermine he loaded the Perry River outfit and with Mr. Gavin started east. At Turnagain Point progress was barred by new ice and so they turned back and endeavoured to reach Bathurst Inlet in in order to get the supplies safely warehoused for the winter. However, they were finally frozen in approximately thirty miles north of the latter post and report that supplies and personnel are all safe. The crew consisted of Mr. and Mrs. E. J. Gall, Jack Wood and A. Gavin, who was to have established the post at Perry River but will now have to wait until the coming season.

Pilot Matt Berry, of Canadian Airways Limited, added to his already brilliant record as a pilot in the North by his successful flight to Letty Harbour to bring out Bishop Fallaise and others of the Roman Catholic mission who had been frozen in near there last fall. The flight was made from Aklavik under the most difficult conditions and during the shortest days in December. It was successfully accomplished, though delayed through bad weather and forced landings in out-of-the-way places.

Charles V. Rowan, who is holidaying in Vancouver after seven years in the district, mostly at Fort Collinson, the most northerly post, is at present suffering from an attack of pleurisy in Vancouver. We hope he makes a speedy recovery, and feel Vancouver is a better place to have it than Fort Collinson.

Charles Rowan has been studying wireless telegraphy this winter with a view to taking out an amateur experimental licence for his own station up north, which would be of immense interest and benefit to him.

William Gibson has gone home to Ireland on a short furlough. He will be returning to the Boothia Peninsula, King William Land section, via the *Nascopie* next summer.

Ralph Jardine is spending part of his furlough in Bermuda, which we think is a first rate place for an Arctic trader to holiday. He recommends it to all the men in the Western Arctic when they next come outside.

We had a visit from Bishop Breynat and were interested to hear that he has purchased a Waco 'plane and has engaged his own pilot. He intends to cover all the Mackenzie River and Western Arctic missions before break-up.

We had an excited letter from an amateur wireless operator in Calgary the other day, who stated he had contacted an amateur in King William Land by the name of Gjoa Haven, and had been told he could write to him in our care at Winnipeg. The amateur at King William Land, of course, was D. G. Sturrock, located at Gjoa Haven, so it can be seen he is still getting full value out of his amateur short wave set.

Mackenzie-Athabasca District

Since our notes for the December issue of *The Beaver* were written, the Fur Trade Commissioner has paid us a visit and while here attended with the district manager a luncheon given to His Excellency the Governor-General, Lord Tweedsmuir.

At the end of November an ice jam occurred in the Peace river and for a while imperilled our posts at Fort Vermilion and Little Red River. This was an unusual happening for the time of year.

Fresh discoveries of minerals continue to be made around Goldfields on Lake Athabasca and Yellowknife on Great Slave lake. So far this part of Canada has given evidence of the possibility of finding almost every metal, precious or otherwise, with the exception of tin.

From almost every post in the district we learned that the radio broadcast by His Majesty King Edward VIII was heard in December. Some posts heard it on English wave lengths, but mostly it came over those used by North American stations.

Fur bearing animals are scarce around many posts this winter and this, combined with the poor weather at the beginning of the season, has made conditions somewhat hard for many trappers.

C. H. J. Winter arrived at Edmonton from Fort Nelson on January 7th.

On January 23, KSL, of Salt Lake City gave an all-night broadcast to the North in conjunction with the Edmonton *Bulletin*. Although we gave a carefully prepared list of names and places which KSL required for their purpose, the result, as given to listeners-in, was somewhat mixed up, probably through the announcer being entirely unfamiliar with this part of the world. The broadcast was most interesting in spite of this and undoubtedly was enjoyed.

Early in January the district manager left for a long trip of inspection. He visited first Fort St. John, Fort Nelson, Nelson Forks and Fort Liard and at present is somewhere around Hay Lakes or Upper Hay River. He may not return to Edmonton until the end of March.

Mr. R. J. Gourley, member of the Canadian Committee, paid us a visit on January 11 on his return from the retail store conference at Calgary.

E. W. Fletcher, Fur Trade controller, visited us for a few days at the end of January.

H. P. Warne visited us towards the end of January, and H. E. Cooper arrived here on January 25. He then left for Fort McMurray, and upon his return visited Cold Lake post.

W. S. Crossley returned from furlough in England on January 25. He brought back a bride, having married Miss Kate Dickson at Gateshead on Tyne, Co. Durham, on January 2, 1937. Mr. Crossley will be stationed at Sturgeon Lake post while Mr. Forman is on furlough.

Another of our staff who has renounced the single life is J. G. Craig, manager of Hay River post, who married Miss Edith Goddard, matron of the Anglican mission at that place, on December 31, 1936. To both of these we extend our congratulations.

On January 1 the Hotel Mackenzie at Fort Smith was transferred by Mr. Joe Lanouette to the Mackenzie River Transport. Mr. Paul Kaeser will be the manager, and already he has done much to let the community know that it is our intention to make the hotel a social centre for the north country. On December 31 the usual New Year dance was held, and since then a masquerade ball was held which was the best thing yet arranged there. Costumes were brought in from Edmonton and everyone present had what one person described to us as a "whale of a time."

The Right Reverend W. A. Geddes, Bishop of the Yukon, visited us early in February, and we do not think he missed anyone in the list of enquiries he made regarding old friends.

Influenza has been prevalent around Edmonton this winter. C. H. J. Winter recently left for Cold Lake to inspect the post and shortly after his arrival, not only were the post manager, Mr. Cuthill, and his wife and children stricken with the complaint, but Mr. Winter also. Two members of district office staff have been laid up with it.

Aeroplane activity at Fort McMurray may be somewhat lessened in the near future, as Canadian Airways Limited are transferring their air base for northern flights from that place to Edmonton. With an excellent landing field in the city and a seaplane base at Cooking Lake, Edmonton is well equipped to handle heavy traffic.

Mackenzie River Transport

Our enlarged and pictorial folder, "Down North," for 1937 was published during December.

Air companies resumed operations in November and have been moving freight from the frozen-in barge at the mouth of Athabasca river to Goldfields, also from Nelson Forks to Fort Nelson.

Two new barges, each of two hundred tons capacity, are to be placed in service on the Athabasca. These will be constructed at Tar Island shipyard under the supervision of J. A. Davis. A new Diesel engine will also be installed in the *Canadusa*.

Indications are that we will have another busy season this year, equalling that of 1936, when all previous freight records were broken.

The following called at the office at Winnipeg during the past three months: Bishop Geddes, Bishop Breynat, Father Serrurot, Messrs. C. Ozol, Geo. King, K. Y. Spencer, J. G. Woolison, J. W. Campbell, R. C. Fitzsimmons, A. L. Cumming and A. T. Penhorwood. The latter has been spending a well earned vacation at the home of his wife's parents at Winnipeg.

H. G. Seybold is spending two weeks at the west coast where he is undergoing naval training (R.C.N.V.R.).

The Mackenzie Hotel at Fort Smith was taken over by the Mackenzie River Transport on January 31 from Mr. Joe Lanouette. Paul Kaeser has been appointed manager.

We congratulate M. MacDonald, first mate of S.S. *Distributor* for some years, on having successfully passed his examinations for master of minor inland waters.

We extend our sympathies to Mr. and Mrs. M. L. Ryan on the death of their eldest son John at Edmonton in November.

Saskatchewan District

The district manager left on November 22 for the western sector of the district, visiting Montreal Lake, Lac la Ronge, Stanley and Souris River posts en route to Isle a la Crosse, and making inspection of Isle a la Crosse, Pine River, Clear Lake, Buffalo River and Beauval posts before returning to Winnipeg on December 18.

General conditions throughout the sector visited were found to be fairly good. Natives were all in good health, and only a minimum of sickness was reported.

At Clear Lake and Buffalo River the natives were giving considerable attention to commercial fishing, nets having been supplied for this purpose by the Department of Indian Affairs.

R. B. Urquhart, who arrived in Winnipeg from Cumberland House on October 20, is at present in the northeastern sector of the district making an inspection trip embracing Cedar Lake, Cross Lake, Oxford House, God's Lake, Island Lake, Norway House and Rossville posts. He expects to return to Winnipeg towards the end of February.

J. Runcie, of Island Lake post, reached Winnipeg on January 12 from Island Lake, and is now attached to the Fur Trade Commissioner's office. He has been succeeded by A. W. Scott, late of Buffalo River post.

Additional staff transfers during the quarter include: G. B. Wright from Berens River, where he was temporarily in charge, to Stanley; R. J. Campbell to Clear Lake from Cumberland House; J. W. Law from Stanley to Souris River; W. J. Gordon, who returned to duty after nine months' absence on sick leave, was transferred to Wabowden post, Nelson River district.

Mrs. E. J. Leslie, with her infant daughter, left Winnipeg on November 22 to join her husband at Lac la Ronge post.

We had the pleasure of a visit from the Hon. John Buchan, son of His Excellency the Governor-General, at Montreal Lake post during December, the week being spent in big game hunting in the vicinity of the post.

Congratulations are due William Gowans, post manager at God's Lake, and Miss Anne Repitta, of Regina, who were married at God's Lake on the 26th of December.

George Cotter, of the Winnipeg depot, is at present assistant at Berens River post, replacing E. G. Cavaghan, who has resigned.

The following were amongst visitors to the district office during the quarter: Bishop Martin Lajeunesse of The Pas; L. F. Tapper, God's Lake; J. W. Pierce and D. N. Sharpe, of the Manitoba-Ontario boundary survey; Captain T. Pollock, of Selkirk Navigation Company.

Nelson River District

The first winter mail from the Chesterfield section reached Churchill on 26th January, 1937, having been taken south by Father Ducharme, O.M.I. We understand that the trip this year was more arduous than usual on account of severe blizzards and very poor travelling conditions. Father Kermel of the Eskimo Point Roman Catholic mission was carried by the mail team to Churchill for medical attention, and we trust that he is now recovering from his illness.

We have been in touch by radio with Chesterfield Inlet post and Baker Lake post and are pleased to state that the staffs at these points are well.

W. E. Lyons reported his arrival at Nonala on November 7, after having been more or less marooned at Don Lundie's camp at Long Point since October 3. The heavy gales experienced during October prevented the making of the trip to Nonala by whale boat as was originally intended, and it was not until after freeze-up that he reached the post. George Anderson, the post manager who handed the charge of Nonala over to W. E. Lyons, arrived at Winnipeg on 10th December, left two days later for New York to connect with the R.M.S. *Queen Mary*, and was home in Edinburgh four days before Christmas.

R. H. Stewart, of the Cyril Knight Prospecting Company, visited the office on 31st December and delivered to us mail from Padley post. In this mail we learnt with regret that George Yandle, one of our customers who has trapped in the Padley area for a number of years, had been drowned. Our sincere sympathies are extended to his relatives and friends.

Mails have also been received from York Factory, Trout Lake, Eskimo Point, Caribou, Shamattawa, Bearskin Lake, Nelson House and Split Lake posts, while the usual regular communication has been maintained with Pukatawagan, Wabowden, Gillam and Churchill.

Rev. Rowe, Anglican minister at Churchill, visited Caribou post early in the new year and took with him all mail for that point. Sickness is again prevalent amongst the Chipewyan Indians in that section, but we understand that country food has been plentiful inland.

We would welcome to this district W. J. Gordon, who has recently been transferred from Saskatchewan district and is now located at Wabowden, Manitoba.

The district manager inspected Trout Lake and Bearskin Lake posts during the latter part of December and is at present out on his usual winter inspection of the Manitoba posts. It is expected that he will return to Winnipeg around April 1.

Visitors to the office recently were: R. W. Starratt, Hudson, Ontario; G. Coutts, government hydrographer, Churchill, and Jean Caux, Woodlands, Manitoba.

Superior-Huron District

Indian Agent J. G. Burke, in his survey of the wants of the Indian band at Montizambert and the question of feeding the children at the school, has approved of the serving of a hot meal at noon each day.

Motor cars are now able to reach Hudson over the newly opened section of the highway from Sioux Lookout.

We regret to report the loss by fire of our store at Temagami, and the store and warehouse at Hudson. The real cause of these disastrous fires has not been learned.

A new store has already been erected on the same site at Hudson, and plans are underway for building a new store at Temagami.

Wm. Gregory, formerly post manager at Pine Ridge post, is at present in the Old Land, having been ordered by his doctors to take an extended rest following his recent illness.

V. A. Pauls, clerk at Sioux Lookout, has resigned from the service to accept a position with Swift Canadian Company.

The four-year-old-son of Mr. and Mrs. D. Donaldson, of Nipigon House post, was brutally attacked by native dogs while at play outside his home, bruising his face and ear somewhat, and necessitating a trip overland to the north line to bring the child out for medical attention. We are glad to report that the young lad has fully recovered.

L. Turgeon, post manager of Missanabie, was married to Alida Larocque on November 28, 1936, in the Holy Cross Cathedral, Haileybury, Ontario. We wish this young couple every success and happiness.

Influenza has been prevalent in certain sections of the district. We understand, however, that it is of a rather mild type.

Aime Baulne, clerk at Gogama, had the misfortune recently to severely cut his finger while performing his duties. It was necessary to send him to a Sudbury hospital for treatment.

We welcome W. G. Curran, a new employee to the staff of the district. He has proceeded to Sioux Lookout as butcher.

M. Cowan and H. E. Cooper have visited several of the "line" posts recently.

The following employees have visited district office recently: V. A. Pauls, B. G. Clench, J. A. Glass, B. C. Lemon and J. L. Charlton.

M. S. Cook has been in relief duty at Cavell, Long Lake, Missanabie and Dinorwic.

James Bay District

Mr. and Mrs. R. M. Duncan and daughter left Moosonee on December 3 for Toronto and the United Kingdom on furlough, and will return next April or May.

A. H. Michell is expected to return from furlough in March and, after spending some three weeks at the Montreal Fur Purchasing Agency, will proceed to Attawapiskat.

P. J. Soper is accompanying the district manager on his inspection of west coast posts, and also up the east coast as far as Fort George, where Mr. Soper will be stationed.

We regret to report that Joseph Chilton, head canoe builder at Rupert's House passed away on 2nd October last after a prolonged illness.

Mrs. D. C. Bremner came out from Attawapiskat in January on account of ill health, and we understand Mrs. R. Gordon, of Albany, has had rather a bad siege of tonsilitis. We hope by now that both these ladies are fully recovered.

Mrs. Gilbert Thompson, of Moose Factory, was also on the sick list and was flown out from Moose Factory to Cochrane between trains for attention.

Mrs. C. Saucier is again at Moose Factory on the staff of the Indian residential school, after being stationed at Pangnirtung and other points since her last stay at Moose Factory. We are sure her many friends in that vicinity are glad to have the opportunity of renewing acquaintanceship.

We are also advised that the Indian residential schools commission are making preparations to erect a fine residential school at Moose Factory with accommodation for one hundred pupils. Material is being transported from Moosonee this winter, and construction will commence as soon as conditions allow.

Frank Melton, formerly of Great Whale River, visited Winnipeg last fall during his automobile tour of the Western United States. We understand he had a very enjoyable trip and is now beginning to get "homesick" again.

A schedule of Treaty No. 9 party just received shows that after the party arrives at Weenusk from Fort Severn on July 1, they will not proceed on down the west coast of James Bay as in former years, but will return to Sioux Lookout via Lansdowne House, Fort Hope and Osnaburgh. Dr. W. L. Tyrer, of Moose Factory, will make the annuity payments at English River, Ogoki, Albany, Attawapiskat and Moose Factory.

At the time of writing an aeroplane flight is being made from Oskelaneo to Nitchequon for the purpose of replenishing the outposts' stock. The plane will return via Neoskweskau, and we expect to hear from Messrs. Dunn, McLeod, and Cargill by this opportunity.

St. Lawrence District

The Fur Trade Commissioner passed through Montreal in January en route to London, where he will attend the Company's fur sales. He was accompanied by W. Gibson, of Ungava district.

Navigation at the Port of Montreal closed this season on 12th December, when three Scandinavian steamers sailed for European ports. Little or no trouble was experienced by ice.

Abnormal fall weather conditions prevailed throughout the district this season. After an early freeze-up weather became milder, followed by extremely heavy falls of snow and then a spell of subzero temperature. Owing to the deep snows the ice was slow in making; as a consequence aerial transportation was later than usual in getting under way.

The air mail service in the Gulf of St. Lawrence commenced operations on December 18. The point of departure has been changed from Quebec City to Rimouski, crossing over the St. Lawrence to Bersimis and then proceeding east as far as Natashquan. Every two weeks the service is extended as far as Harrington. Twin-engined "D.H. Dragon Rapides" are being used.

An enjoyable luncheon was held at the Queen's Hotel on Christmas Eve, which was attended by the staff of the Montreal office. Included amongst the guests were: W. E. Swaffield Sr., F. C. Gaudet, pensioners; and W. E. Swaffield Jr., Ungava district.

During the latter part of December seven live fisher and one live marten were shipped to the fur farm at Bird's Hill, Man. The animals were caught at Manowan and shipped out to the line by aeroplane. Another live fisher has since been shipped out from Woswonaby, and another is awaiting transportation.

From reports which we have received from many parts of the district, there appears to be a general scarcity of partridge, ptarmigan and rabbits. In a number of sections moose are also said to be scarce.

W. E. Swaffield Jr. recently flew into Manowan to relieve his brother, A. B. Swaffield, who was suffering with eye trouble. After medical examination in Montreal, treatment prescribed will bring the eye back to normalcy.

It is with regret we record the death of Laura Iserhoff, who died on 10th October after a two-months illness, and on 10th November her younger sister Patricia, aged five years, died after a short illness of only a few days. We extend our sincerest condolences to Mr. and Mrs. Iserhoff.

H. A. Graham was been transferred from Weymontachingue to Woswonaby, W. E. C. Tutching, of La Sarre, going to the former post.

J. N. Stevenson, Oskelaneo post, was transferred to Pointe Bleue in December.

We are pleased to report Mrs. A. B. Swaffield, who recently had to be flown out from Manowan to Montreal to undergo a serious operation at the Royal Victoria Hospital, is progressing favourably and her baby girl born on Jan. 29th is likewise making good headway. Mrs. Swaffield's condition was extremely serious, and upon her arrival in Montreal had to have two blood transfusions. The doctor now considers her well on the road to recovery.

W. C. Newbury during the past month has visited Pointe Bleue, Weymontachingue, Oskelaneo and Senneterre.

The district manager is at present making an extended inspection trip by aeroplane among the inland posts, and has so far visited Manowan, Barriere, Grand Lac and Woswonaby.

R. M. Duncan, Mrs. Duncan and their daughter, of James Bay district, passed through Montreal during December en route to Scotland.

Visitors during the past quarter were: Geo. W. Allan, Chairman Canadian Committee; Mr. and Mrs. A. H. Doe, Winnipeg; D. A. Nichols, Ottawa; Mr. Craig, of Landau & Cormack, Toronto; Mrs. Michael Lubbock, Winnipeg; and Miss Lubbock, London, Eng.; Garon Pratte, K.C., Quebec City; Mr. and Mrs. H. L. Webber, The Pas, Man.; F. C. Gaudet, W. E. Swaffield Sr., Major C. G. Dunn, Quebec City; and D. McKay, Canadian Committee office.

On December 17th, 1920, a party of three airmen were brought into Moose Factory post in a half starved and exhausted condition. The story at that time made the headlines all over the continent, as the men left Rockaway Station, Long Island, N.Y., on December 13th in a free balloon with the intention of flying across New York State.

After twenty-five hours of battling the storm, they landed, and at the end of the fourth day were assisted into Moose Factory by the natives. Search parties were sent out on many occasions to locate the balloon and salvage anything of value, but it could not be located and was given up as lost.

On January 2nd, 1937—sixteen years later—we learn that a native of Moose Factory has discovered the balloon only nine miles from the post.

An interesting article regarding the flight will be found in *The Beaver* for February 1921, Volume 1, No. 5, page 9.

Labrador District

The district manager left for Labrador by the M.S. *Lutzen* on December 1 and arrived at Frenchman's Island on the 4th. He is now en route to Makkovik and Hopedale, having visited Cartwright, Rigolet and North-West River.

We regret to record the death of Captain Rideout of the *Lutzen*. He was washed overboard and drowned off the Nova Scotia coast in very stormy weather. This tragic happening took place shortly after his trip to Labrador with the district manager. Captain Rideout was well known to all Hudson's Bay Company employees in Southern Labrador.

The sealing steamers are now being put in readiness for the annual spring hunt. Only two steamers will sail from Job Brothers premises this spring as the *Thetis*, which sailed out of Jobs for many years, was destroyed last summer, her days of usefulness being past.

Captain Kean, veteran sealing master, will not go to the ice this season. This will be his first absence for a long period of years. Captain Kean commanded the *Nascopie* several springs and brought in good trips of fat.

James A. Ford, of Ungava district, who is receiving medical treatment is much improved in health since his arrival last fall.

Chesley Russell, also of Ungava district, has spent the last month in St. John's taking a course in wireless telegraphy.

Ralph Jardine, of the Western Arctic, paid us a visit recently on his way through to Halifax. Ralph is on his way to Bermuda to spend a few weeks with his brother, who is residing there.

Abram Broomfield pays us a daily visit. He is enjoying a furlough and spending most of his time in St. John's.

Visitors at the office recently included L. Stick, who was temporarily engaged as accountant at Blanc Sablon last year.

Rev. Father O'Brien also called to see us during a recent visit to town.

Hon. E. N. R. Trentham, Commissioner for Finance in the Newfoundland Government, has been appointed financial adviser to the British embassy at Washington.

Ungava District

The winter mail for Northern Quebec posts left Moose Factory at the beginning of February. This mail will be carried as far as Great Whale River by J. W. Anderson, district manager of James Bay, who is making his annual winter inspection of east coast posts, and from there it will be taken on by Eskimo carriers.

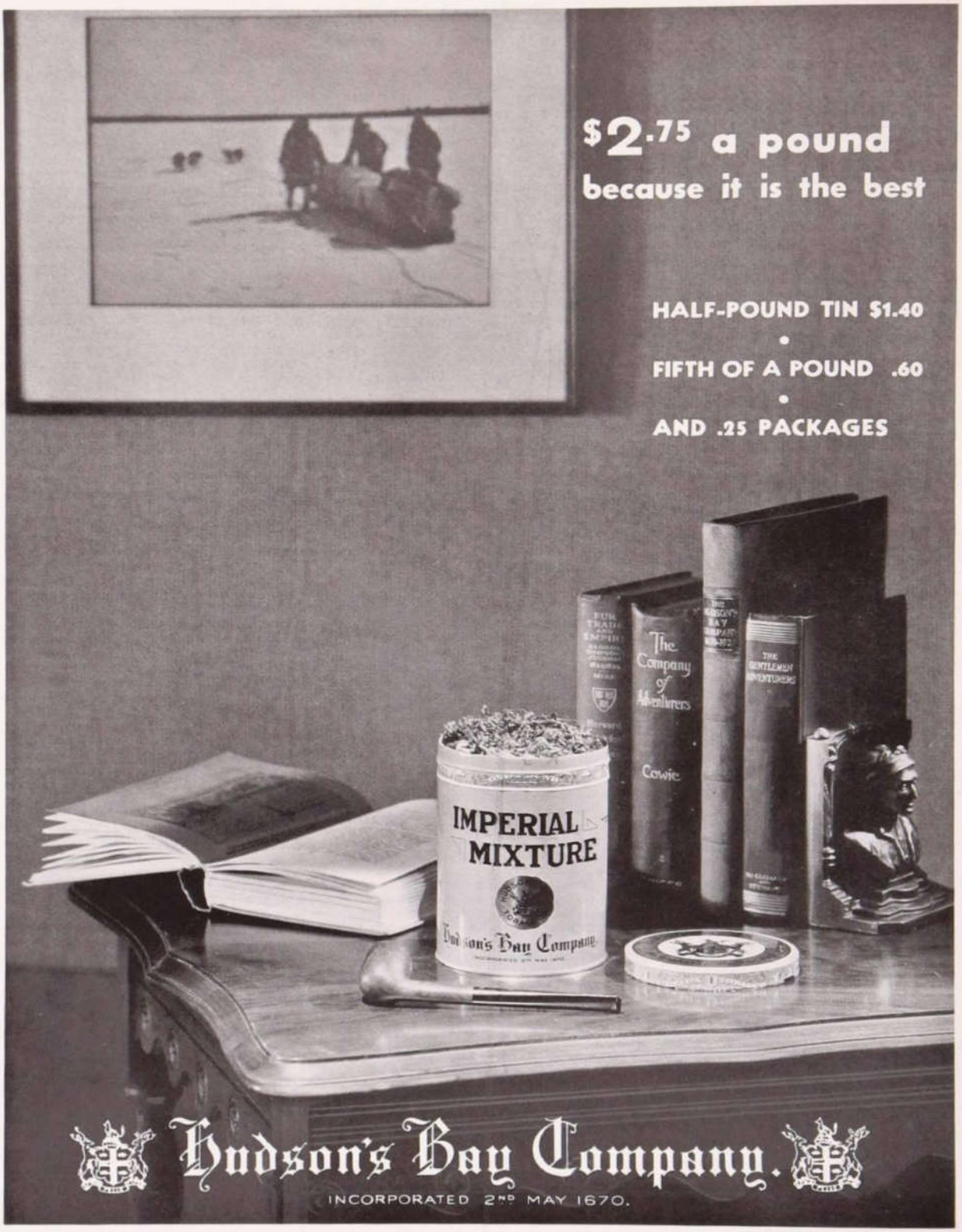
W. Gibson is at present having a short vacation in Ireland visiting his father. He sailed from New York on the *Berengaria*, January 20, and expects to return to Canada about the latter part of March.

Arrangements have been made to open a new post at Brentford Bay on Boothia Peninsula this summer, and W. Gibson will superintend the establishment of the post and then proceed to King William Land to take up duties in the Western Arctic.

We have heard that James Smith and Gordon Webster were married in Scotland recently, and we take this opportunity of wishing both couples the best of luck.

Alan Fraser left Winnipeg for Scotland during the early part of December and will probably spend a few months there on vacation.

The staff and other friends in the district will be very sorry to hear of the death of Mrs. McKeand at Ottawa recently and will, we know, wish to join with us in expressing our deepest sympathy to Major McKeand.


$2.75 a pound
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The Company of Adventurers
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IMPERIAL MIXTURE
Hudson's Bay Company
Hudson's Bay Company.
INCORPORATED 2ND MAY 1670.

Seal Hunting with Kubluk

(Continued from page 9)

however, and he was having a good time, the best hunting he had had all winter.

On Saturday morning the komatik was loaded up, first with frozen seal, then my outfit and whatever gear could not be left behind. The igloo was sealed up, the boat up-ended against the side, and we headed south towards Churchill. The dogs had a good load to haul and we had to walk or jog-trot most of the way, getting an occasional ride on the komatik when the going was good. Finally, after a slow struggle through the rough ice fronting Cape Merry shore, we pulled into the home camp by the mission about 3 p.m.

The reception given the hunter's return to the Eskimo encampment was even more demonstrative than it had been the previous week. They were all happy at the prospect of a supply of seal meat for some time to come.

Kubluk had many more trips to the floe in the weeks that followed, but on April 26 he came in with his komatik to the mission, quickly threw together a few belongings, got some grub, coal-oil, ammunition, etc., and was off again in two hours, this time on the long trail back north with the family to his old home in Rankin Inlet.

Good hunting, friend Kubluk! Kakeeverut hopes to see you again some day—"Tagvavutit!"

Art in the Archives

(Continued from page 15)

scenes like this with those he loves for ever."

Of Norway House he had many pleasant things to say. He found the shores of Lake Winnipeg flat and uninteresting; yet here and there, he remarked, "a few pretty spots may be seen at the head of a small bay or inlet, where the ground is a little more elevated and fertile." Five days it took them to reach the mouth of the Red river; "a very swampy, sedgy, flat-looking mouth it was, covered with tall bulrushes and swarming with water-fowl."

From the Stone Fort to Fort Garry "the river-banks were lined all the way along with the houses and farms of colonists, which had a thriving and cleanly appearance . . . I inferred that the settlers were generally well-to-do in the world.

"Red River Settlement is, to use a high-flown expression, an oasis in the desert; and may be likened to a spot upon the moon, or a solitary ship upon the ocean. In plain English it is an isolated settlement on the borders of one of the vast prairies of North America."

"The country around it is a vast treeless plain, upon which scarcely a shrub is to be seen."

"The scenery of Red river . . is neither grand nor picturesque, yet, when the sun shines brightly on the waving grass, and glitters on the silver stream, and when the distant and varied cries of wild fowl break in plaintive cadence on the ear, one experiences a sweet exulting happiness, akin to the feeling of the sailor when he gazes forth at early morning on the polished surface of the sleeping sea."

Of Lake of the Woods he wrote, "There is nothing, I think, better calculated to awaken the more solemn feeling of our nature (unless, indeed, it be the thrilling tones of sacred music) than these noble lakes, studded with innumerable islets suddenly bursting on the traveller's view as he emerges from the sombre forest rivers of the American wilderness. The clear unruffled water, stretching out to the horizon—here embracing the heavy and luxuriant foliage of a hundred wooded isles, or reflecting the wood-clad mountains on its margin, clothed in all the variegated hues of autumn; and there, glittering with dazzling brilliancy in the bright rays of the evening sun, or rippling among the reeds and rushes of some shallow bay, where hundreds of wild fowl chatter, as they feed, with varied cry, rendering more apparent, rather than disturbing, the solemn stillness of the scene; all tends to 'raise the soul from nature up to nature's God' . . ."

Whether Ballantyne ever painted any of these landscapes which he described so poetically I do not know. I like to think that he did. Of our three artists, his was the most romantic mind. He had an eye for pathos and the beauty of repose in nature. Kane in comparison was dour and pedestrian. Of Lake of the Woods Kane's only comments pertained to a scourge of green caterpillars which had devoured the greenway and which threatened to fall on his food.

Least justice is done to Ballantyne's talent in the accompanying illustrations: obviously his work has been falsified by the engraver. At that time wood-engraving had reached the height of its development in England—it was the commonest method of reproduction—but even the best of the engravers were far from being irreproachable and made sad botches of the drawings given them. Rossetti was moved to write:

"O, Woodman, spare that block,
O gash not anyhow!
It took ten days by clock,
I'd fain protect it now.
Chorus—Wild laughter from Dalziel's Workshop."

Barren Land Bugs

(Continued from page 21)

the adults all die, as they are very short lived. The eggs then, in the south, must be dried and frozen before they will hatch, but in the north the shrimps are found in permanent pools so the eggs either need only be frozen or those that have dried and been frozen are blown into the pools and hatch. A week or so after the ice has melted or in the last of June, at Churchill, the eggs hatch and the tiny fairy shrimps are found gliding through the water. They become so numerous in certain pools as to make the water almost thick. Contemporary with them are the water fleas or cladocerans. These look like infinitesimal clams a little larger than the head of a common pin. They swim through the water in a jumping, jerking motion by stroking with their antennae. They have two eyes, a short spine-like tail, and the eggs are carried on the back under the shell. These were so numerous in some of the pools that they coloured the water gray, and you could dip up double hands full making it feel like the water was full of sand. Both the fairy shrimps and water fleas feed on diatoms and microscopic animals.

The pride of the fresh water crustaceans was Lepidurus, the largest and most beautiful I have ever had the pleasure of meeting. They were found only in one pool and grew to be nearly three inches long. They resemble very closely the common horseshoe crab of the ocean shores, but had a heavier body and two tails. Apparently they fed on the algae of this one pool and were not very numerous in it.

Let us leave the water and take a look at the bush. The bush is about four miles from Churchill at the nearest point. It is just a scraggly remnant of the great continental coniferous forest. Black spruce and tamarack are almost the only trees present, and these are seldom more than thirty or forty feet tall. The trees are widely spaced and among them is an open thicket of arctic willows, dwarf birches, and grass. In most places the area is very wet. Each spruce tree is on a little knoll, so that its roots are not too wet, while the tamaracks grow even in standing water. Out on the tundra in the shelter of rocks the spruce grows either prone on the ground or mostly prone and sending up only one or two shoots to brave the cold northern blasts. These shoots may be only five or six feet tall and an inch or two in diameter, but they will be forty or fifty years old. There are no limbs on the north and even the heart wood is lopsided as there is no, or very little, growth on the north side. Strangely enough the limbless side of these trees is due north by the compass. The bush is the haven of mosquitoes, black flies, and bulldogs. There were times when it was difficult to see out through my netting, because the mosquitoes were swarming around me so. By the middle of July the dragonflies were out in full force, and if I would stand still they would come and alight on my netting and pick off the flies. A dozen dragonflies flying about me would materially reduce the local fly population in a very few minutes. The young of the dragonflies are found in streams and pools in the bush attacking and eating aquatic insects. The dragonflies were in turn fed upon by the Canadian jays.

Many tundra plants, even to the reindeer mosses, invade the bush, so that many of the insects taken there were similar to those of the tundra. Ants were very scarce on the tundra, but a wood ant was found in almost every stump and fallen log in the bush. The queens of these colonies laid their eggs very early in the year, and in the first of June the young grubs were found being cared for by the workers in chambers above the water line in the stumps and logs. These were full grown in the last of July, but did not form the naked pupae until the first of August. The ants must have emerged before the advent of cold weather.

The spruce and tamarack do not have very many insects that are indigenous to them, but they did have the same little jumping plant lice on them as inhabited the willows. Furthermore they were heavily populated by spiders. I have not mentioned the spiders, but will discuss them now as a group. With all of the millions of flies it would be natural to expect a great variety of spiders, and this is true. Running spiders were found in all dry places. The trees were so covered with the webs of the orb spinning spiders and net spinners that on a dewy morning they appeared covered with a fine clinging tent. In the tundra the willows had their hosts of spiders, and even among the sedges and grasses. Besides the web spinning spiders there were many varieties of the solitary hunting and jumping spiders. These could be found on all types of plants except the lichens and reindeer mosses and were especially abundant among the flowers. During June the young spiders that had hatched during the winter or in the spring were ballooning. In ballooning they crawl up on some object that gets

the full force of the wind and spin out several lines of silk which eventually offer enough resistance to the wind that the spiders are pulled away and go floating into space. By this method spiders have been known to be blown hundreds of miles, and they have even been caught over a mile in the air. By the first of July all had settled down to the business of spinning webs and eating.

But this would go on and on far into the night if I attempted to enlarge on any more of the insects which I saw and collected or studied, so I'll just mention a few more of the interesting forms. There were apparently very few bees but the bumble bees. The arctic bumble bees are beautiful things with black, yellow, and orange stripes. They range in size from the large ones, as big as the southern species, to the tiny ones hardly as large as a honey bee. Several species were found, and they carried masses of pollen on their legs after having visited the many tundra flowers. Besides these were the butterflies. Early in July there were many brown butterflies which were soon followed by a galaxy of yellow and white butterflies. These were the most difficult insects of the tundra to catch, for at the least disturbance they would bounce into the air, be caught by the high winds, and away they would go. I regularly used my best golf language while trying to net them.

As I was in the company of Mr. A. C. Twomey, an ornithologist, I had opportunity to examine many birds for the bird lice. The birds were infested with the chewing lice which run over the body and eat the feathers and skin scales, and with mites and fleas. Apparently the sparrows were the only ones to have many fleas, while the ptarmigan were the lousiest of the birds. Some of the birds, as the Labrador longspurs, Smiths longspurs, and the northern horned larks, were almost free of lice. The insect annihilating ability of birds was forcibly brought to me when I took two young northern horned lark and attempted to feed them and keep them well and fat. They ate over a half of a pint of fly maggots a day plus whatever other insects I would throw into the cage with them.

I have hardly scratched the surface of interesting things about the insects and arthropods of the north, but in closing I would like to say that during my stay and studies I was never treated so royally as I was by the people of Churchill. The hospitality of the Friendly North will always hold a warm spot in my heart.

Orkney and the Hudson's Bay Company

(*Continued from page 43*)

small children, and who perhaps may have fallen into a temporary arrear, upon whom the unfeeling landlord has no compassion. But, behold the consequence! in a few years, from ignorance and want of industry, the emigrant, in his turn, is also reduced to poverty, and must give way to another of his own tribe. By these means, most of the farms are overrented; and this fluctuating state of things puts an effectual bar to all improvements, and surely calls aloud for reformation from every virtuous landholder. There are at present, from this parish alone, in this infernal settlement, 43 of our prime young men; and 12 more are just upon the eve of embarking: This, added to the number of seamen abroad, scarce leaves hands to cultivate the ground, and must sooner or later depopulate the country. By those means, there are no spare hands for manufacturers; and the fishery, which, next to the kelp, ought to be the great staple of Orkney commerce, is entirely abandoned; and besides, the King's service is deprived of many hardy seamen; for the moment war is proclaimed, for fear of being pressed, they skulk away to this distant settlement."

At this point something would seem to have happened which suddenly soothed Mr. Liddell. Possibly his housekeeper smiled. Anyhow, he abruptly ends his diatribe with this surprising tribute:

"At the same time, it must be acknowledged, for the honour of the Hudson's Bay Company, that no men ever acted with more integrity, or fulfilled their agreements more honestly, than those gentlemen have uniformly done; and further, upon a representation from the present incumbent of this parish, they have been pleased to augment the wages to £10; by which means above £1000 Sterling per annum is added to the income of Orkney."

So that, after all, the Company comes not so badly out of its encounter with this eloquent gentleman.

(In the next issue Mr. Clouston will tell of those Orkney islanders who rose to commissioned rank in the Company's service.)

On Wings of Arctic Summer

(*Continued from page 48*)

By July the young terns were hatched, and until they were ready to fly the parent birds kept up a continuous search for food, most of which was taken along the coast a mile or so away. There, gracefully treading the wind, they would dive after small minnows, often plunging like arrows from forty to fifty feet and disappearing beneath the surface of the water, only to rise instantly in a shower of spray with a small wriggling fish securely held in their small pointed bills.

In August the arctic terns, their young now fully grown, left the colonies. One by one they deserted their young and started on their southward migration. They move along the coast towards the east to the north Atlantic, where they fly across the open ocean to the shores of western Europe, then down the west coast of Africa, on across to the east Brazilian coast of South America. From these two points they continue southward down into the Antarctic. But after a few months they again become restless and begin drifting northward, following their southward migration route and eventually land at their breeding grounds in June. Thus they complete a 15,000 mile journey, the longest migratory flight of any known bird.

June is really a busy season for the birds. They no sooner arrive on their arctic breeding grounds than they start their courtship in preparation for nesting. During these early June days great activity is the predominant feature. Aerial acrobatics and the strutting of spring plumages are seen, and songs are heard on every hand. The plants suddenly come to life as if by magic. The delicate dryas, or arctic heather, fairly shoot out of the melting snowbanks and in a few days the tundras will be white with their blossoms. Their life, however, is brief, lasting but about two weeks. Others take their place in the mad succession of moving events. Great fields of lavender coloured rhododendrons, scarlet vetches and small delicate orchids are a part of the arctic spring —a spring filled with sunshine, flowers, songs and bright feathers. The season is short, a mere gesture, and the show is over. This, then, is a far different land from the cruel north with its blizzards, intense colds, hardships, and even death, so often portrayed by writers. By the last of June all of the sandpipers, plovers, curlew, ducks, geese, phalaropes, sparrows, warblers, shorteared owls and ptarmigan have laid their eggs. The sandpipers and plovers are a curious lot. After the female lays her four eggs, the male does the greater part of the housekeeping. He incubates the eggs and then looks after the feeding of the young. All this he does without a word of protest, while the female stands aloof and watches. Likewise the male red phalarope, smaller and duller in colour than his mate, attends to the domestic duties.

Just where the bird lays her eggs seems to depend upon the individual's taste, which, in general, is the same throughout each species. The low wet tundra, with its variety of sedges, grasses and sphagnum moss, would not, in most localities, seem to bother most birds. The ground cover is but a shallow covering, never more than eighteen to twenty-four inches thick. The whole is underlaid by a heavy sheet of permanent ground ice which never thaws throughout the year. In spite of this seemingly unfavourable environment, the red-backed sandpiper is apparently quite contented to make her nest, a mere depression in the wet moss, in such a place. The young, mere patches of down on long spindly legs, are no sooner hatched than they leave the vicinity of their nest. In another six weeks they undergo a profound change. Their new down is lost for a covering of feathers. The wings develop strong primary feathers, and by the first week of August the juveniles are ready for their southward migration. The adults and young leave together, and by the end of the month the tundra has lost one of its gayest sandpipers.

The sandpipers, plovers and terns are not the only birds to nest at Churchill. Great flocks of horned larks and lapland longspurs are the first to herald the approach of a new spring there. The brightly feathered birds scatter out over the tundras to construct their nests among the rocks and mosses. The nests are well made and lined with the white winter feathers of the willow ptarmigan. Their songs in spring and early summer may gladden the heart of a naturalist, or they may surprise him, for, although he may have seen flocks numbering thousands on the prairies of western North America during fall, winter and early spring, he heard no sound except for a low tinkling chirp.

Many other species nest within a short distance of Churchill. Just four miles south of the townsite the coniferous forest staggers out over the tundra in small stands of weather-beaten trees. This affords the protection required for the nesting of such birds as black-poll warblers, yellow warblers, Harris's sparrows, fox sparrows and gray-cheeked thrushes. These birds' nests are all well constructed and built in the sheltering branches of the spruce trees or on the ground where the lower branches of the conifers afford an excellent roof. Spring in the forest edge and in the forest is quite as fascinating as the avian activity of the tundras. Here even the song of the robin can be heard at

all hours of the day and night. The gray-cheeked thrush sings a song at twilight which is reminiscent of dense spruce forests in northern Alberta. The whistle of the Harris's sparrow brings one suddenly back to the summer of 1931 when its nest was yet unknown to the ornithologist. The rich songs of the fox sparrows and the whispering songs of the black-poll warbler were heard with a mingling of surprise and wonder, as they never sang while in the south. Suddenly the melodious song of the yellow warbler brings one back to memories of willow thickets along a small creek on the prairies of Western Canada.

Everywhere is activity, for the season here is very short. Little time is wasted on the courtship display of gay feathers, but while it lasts it is intense. The nests are built quickly, requiring but four or five days, and by the last of June the young have hatched. The hustle and bustle of life in the forest then begins to subside. Less songs are heard, and as July advances the young begin to leave their nests. The birds begin to change their bright spring breeding plumages, with the males showing the most marked changes, for their new fall plumages resemble the drab colouring of the female and juveniles. For a time small family groups are noticed. But August is a month of comparative silence—few songs, fewer flowers, and everything except the mosquitoes and black flies hides away in the dense thickets of dwarf birch and arctic willow, some species even seeking the dense silent coniferous forests. September is a month of surprises. The family groups begin to join into larger flocks preparing for their southward migration. Strange songs can be heard coming from a nearby spruce thicket, songs that seem to indicate that their makers are not entirely sure of themselves. Upon investigating, a juvenile bird may be observed busily engaged with members of its own species feeding on blueberries and warbling a song it has never before tried.

The coasts of Hudson Bay last July were as interesting as the tundras and the coniferous forests. Here, along the rocky reefs and islands, many water birds could be seen. Passing along in a canoe, arctic terns, herring gulls, glaucous gulls and parasitic jaegers were continuously following and passing slowly a few feet overhead, and, after satisfying their curiosity, moving gracefully away, dipping or diving to the surface of the water to pick up food. Often very large rafts of old squaw ducks, numbering hundreds of individuals, were encountered, which moved slowly away as the canoe drew near and rising only when approached too closely. These flocks were made up of males that heartlessly had abandoned the females after the breeding season. The females had been left behind on their nests on the borders of the small tundra lakes. This then was a stag party among birds, where the male squaws play while the females work.

Reaching the shallow reefs, long lines of heavy-bodied black and white ducks lumbered past in front of the canoe. These were American eiders. A pure white sandbar loomed up ahead. The shores were lined with eider ducks, red-breasted merganzers (fish ducks), and surf scoters, while a huge flock of arctic terns scolded from above. Approaching the bar, the eiders and other ducks began moving in long lines, and soon the bar was deserted except for the terns which had young strewn about over the sand. Suddenly from a mass of seaweed and drift-wood, four young ducks raced towards the water. They were American eider young that had just left their down-covered nest. Those dark olive-tan, downy birds were no sooner set down upon the sand than they started off for the water and gayly swam out to sea to their mother.

At Cape Churchill, about forty-five miles east of Churchill, is found the nesting place of the American rough-leg hawks, so called because their legs are feathered to the base of the toes. A few, however, nested on the cliffs about Churchill, but at the cape there are no cliffs, so the hawks built their large rough nests of sticks on the ground up against large boulders. One pair of enterprising hawks went so far as to build their nest in an old steel Hudson Bay barrel that had been used for a beacon. Always hungry, the young looked like ghosts in their white downy feathers. Unedible remains of lemming, young horned larks and lapland longspurs were strewn about the nest, indicating the food of these birds. It was somewhat of a surprise to find that these large birds of prey were feeding upon young birds, since during their migrations and while on their wintering grounds in central North America they feed on rodents. An interesting migration of non-breeding juvenile hawks about a year old was observed as they followed up the rocky coast line of the Bay during the first week of July. About twenty-five birds, each travelling from a quarter to a half mile apart, and circling as they advanced, could be seen in the air at one time. The nesting hawks had young by that time and were attending to their domestic duties.

Snowy owls, keeping at least a half mile ahead, proved to be common at the cape and stood out like sentinels. When their nest was too closely approached the males at once lost their wariness and, eyeing me suspiciously, circled about overhead. Then they would clap their bills as a sign that another move in the direction of their nests meant an aerial attack.

The nests were easily located. They were always to be found on the top of a flat knoll and consisted of a mere depression in the sand. A large amount of down scattered for a hundred yards about the nests made an excellent marker. Three of the nests which I observed had an average of four young, but the fourth contained eight nestlings. It was interesting to note that the young of a single nest showed a definite gradation in size. There were birds that had just hatched, as well as those which ranged all the way up to ten days old. Owls are noted for this practice. The bird lays only every other day and sits on the nest from the time the first egg is laid, and the young hatch in the sequence. The early downy plumage of the young is a dark slaty blue colour, a decided contrast to the immaculate plumage of the adults. The white adult plumage is not attained until the bird is several years old, and even then in the majority of cases the adults retain a few black-blotched feathers. The food of the young owls is made up almost entirely of lemming and bear mice, although in a few instances they were found to have eaten horned larks and semi-palmated sandpipers. The snowy owl is a permanent resident of the district, but during years of food shortage and very severe storms they will migrate south to central and southern Canada, and some go as far as the northern tier of states.

Fall comes early to the tundras. The season changes to one of ripening berries rather than that of blossoming flowers. The birds are silent. August sees a marked change in the whole bird population,

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for they are there in greater numbers than in the spring because of the new increase of young. The birds for the most part have changed their diets from that of animal to vegetable matter. Even such birds as the Hudsonian curlew, golden plover and herring gull are found up on the high tundras, where they feed extensively on blueberries and cranberries. The smaller birds, such as the sparrows, lapland longspurs and snow birds, eat an abundance of seeds. The small lakes and ponds teem with invertebrate life that serves the less changeable sandpipers and plovers.

By the middle of the month only the juveniles of the sandpipers and plovers are conspicuous, as most of their parents have deserted them and have commenced their long trek back to their southern quarters. Already many new birds have arrived. They are the more northerly migrants which had gone further north to arctic islands in the spring and are now moving southward. Large flocks of white-fronted geese, snow geese, common brants, Canada geese, widgeons, green-winged teal, greater scaup, pintails and black ducks fly along the coast, only to move suddenly inland, heading for marshes and lakes far to the south where winter is unknown. Flocks of curlew, golden plover, sanderling, turnstones and buff-breasted sandpipers tarry a moment on the townsite pond to feed for a day or two and then start southward.

The first cold blasts from the north-west came with flurries of snow early in September. A near cry was heard in the night as the birds passed overhead and were gone. The next morning was bright and crisp after a night of early frost, and fewer birds were seen. The whole landscape was one of changing colour; first a faint pink, then bright scarlet reds, and finally the dull yellows and browns of dead leaves and grasses. Only the larger ducks and geese remained for a short time, and October saw the last migrant leave for the south.

Such then is migration in the life of an arctic nesting bird. Vast continents are covered each year, and the journeys are interrupted at every move by all the forces of nature. Yet they come in the early spring and are just as numerous as in previous years. This is a part of nature, a part of the great plan of life on this earth.

On the Trail of Palliser

(Continued from page 54)

effecting such an object, and the unfortunate choice of an astronomical boundary line has completely isolated the Central American possession of Great Britain from Canada in the east, and also almost debarred them from any eligible access from the Pacific coast on the west."

Eleven years before Palliser wrote the above words Joseph Howe gave his famous address on railways and colonization. He was dealing with a proposed railway from Nova Scotia to Upper Canada, but his imagination envisaged an all-British line to the Pacific. Such a conception was one "which the imagination of a poet could not exaggerate but which the statesman may grasp and realize even in our own day." He predicted "that many in this room will live to hear the whistle of the steam engine in the passes of the Rocky Mountains and to make the journey from Halifax to the Pacific in five or six days."

Palliser died in 1887. In his lifetime the vision of the statesman had become a reality.

HBC PACKET

(Continued from page 3)

press our grateful thanks for your kind interest in our church.

"And we have been very appreciative of the interest that Company servants have taken in our church life here.

"And always as we look upon the repainted exterior we shall be reminded of your generosity.

"We all join in thanking you and sending you greetings.

"Yours faithfully,
Walter McKenzie Chief)
Philip McKenzie (Councillor)
Murdoch McKenzie (Councillor)
Thomas Cook (Warden)
Edward McKenzie (Warden)."

* * *

Samuel Butler is chiefly remembered in Canada for his moan, "Oh God, Oh Montreal," and the tale that hangs thereto. But those of us who are engaged in the retail business can find understanding in a paragraph he wrote many decades ago:

"Why should the botanist, geologist, or other -ist give himself such airs over the draper's assistant? Is it because he names his plants or specimens with Latin names and divides them into genera and species, whereas the draper does not formulate his classifications, or at any rate only uses his mother tongue when he does? Yet how like the subdivisions of textile life are to those of the animal and vegetable kingdoms! A few great families—cotton, linen, hempen, woollen, silk, mohair, alpaca—into what an infinite variety of genera and species do not these great families subdivide themselves? And does it take less labour, with less intelligence, to master all these and to acquire familiarity with their various habits, habitats, and prices than it does to master the details of any other great branch of science? I do not know. But when I think of Shoolbred's on the one hand and, say, the ornithological collections of the British Museum upon the other, I feel as though it would take me less trouble to master the second than the first."

* * *

Quite apart from mining, things are happening in the North which make old-timers grumble in dazed astonishment. Take for example the prospectus of a new club incorporated under the name "Hudson Bay Voyageurs" with headquarters at Moosonee. With cabins constructed and a seaplane service promised, the aims of the club are: "To afford a place and occasion, without pecuniary gain, for the social intercourse of gentlemen and their friends who are interested in the sports of hunting and fishing in the Hudson Bay and James Bay region of the Canadian Northland. Gentlemen of good social position who are amateur sportsmen and are in general sympathy with the aims of the club are qualified for membership. The club, its vessels and advantages will also be available to biological, geographical and natural museum parties. . . ."

Perhaps there is something in the Gentlemen Adventurer business after all.

* * *

Running a Fur Purchasing Agency for the Great Company has brighter moments. Recently a letter from the hitherto unsuspected fur bearing district of Georgetown, Ontario, revealed trapping as a means to municipal peace:

"Dear Sirs: Am enclosing the hides of three tenors and a contralto, so now maybe I can get some sleep. Also you will find a nutria skin taken late in the spring. If it's worth anything, O.K.; if not, still O.K. Yours truly."

* * *

Requests for back numbers of *The Beaver* continue to reach us and we are seriously considering the opening of a "clearing house" department on books wanted. In this connection John Q. Adams, assistant professor of geography at the University of Missouri, Columbia, is looking for a copy of Voorhis' "Historic Forts and Trading Posts."

* * *

Manuscripts received during the past few months from men in the service of the Company have been so numerous and so interesting in subject matter that it is hoped during Outfit 268 to produce an all-fur-trade number with contributions entirely from within the family. But there must be pictures. A *Beaver* without pictures would be like a silver fox without a tail, and while our photographic standards are high, amateur camera men are also getting better all the time. Some of the best stories we have would be doubly interesting if they were illustrated.

And then, what hope of an all-retail *Beaver?* It has been said before in these columns that being a "Magazine of the North" involves some recording of the Company's life in these Northern cities. We are a Northern people, and in the Prairie Provinces of Canada our ways of life through the four seasons are in many aspects unique: Our maintenance of all the wonders of modern department stores in these cities of the plains; our buying in the markets of the world, and our services to western Canadians; the grief and the laughter in the day's work; these are only a few things we are ambitious to reflect in the pages of this "Magazine of the North."

* * *

"Lucky indeed are they who have the fine privilege of working in a business with a fine name. May they gratefully and constantly remind themselves of their good fortune."—*Amos Parrish Magazine.*

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Hullo Phyllis – Kathleen speaking

. . . . . .

Just thought I'd call you up

. . . . . .

Yes, so did I. She always does things so well

. . . . . .

Oh yes, Delicious! my dear. 'specially the coffee

. . . . . .

What? No, I didn't like to ask her

. . . . . .

Oh you did! Of course you could
What kind is it?

. . . . . .

Fort Garry? Well I certainly must get some
It's quite the nicest I've ever had

. . . . . .

My dear, didnt she look a scream? That dress of hers . . . . . .

HUDSON'S BAY *Point* BLANKET GARMENTS FOR MEN

H.B. PARKA
Camel, Empire Blue, Scarlet, White.

RED RIVER
Camel, Empire Blue, Scarlet, Striped.

H.B. MACKINAW
Camel, Empire Blue, Scarlet.

H.B. WINDBREAKER
Camel, Empire Blue, Green, Scarlet, Grey.

H.B. SPORTS JACKET
Camel, Empire Blue, Green, Scarlet.

H.B. BREECHES
Camel, Empire Blue, Scarlet, Grey.

HUNTING or SKI CAPS
Camel, Empire Blue, Green, Scarlet.

MITTS
Assorted Colours.

THE HUDSON'S BAY MACKINAW

During the war of 1812 the first Mackinaw coats were made. The tailor of an English regiment designed them for the troops at Mackinaw and used Hudson's Bay "Point" Blankets for material. They far exceeded expectations for warmth and durability. Now, one hundred and twenty-five years later, we have revived the Hudson's Bay Mackinaw coat, confident that it will today, as then, give adequate protection and rugged wear for work or sports. Other men's garments made from Hudson's Bay "Point" Blankets are listed above, with the colours in which they are available.